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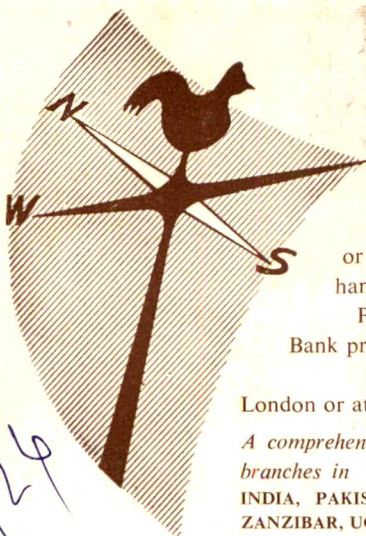
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The progress of the Colombo Plan

By the Most Hon. the MARQUESS OF READING,
CBE, MC, TD, QC

A JOINT MEETING of the East India Association with the Pakistan Society and the Over-Seas League, was held on Tuesday, 14th December, 1954, at Over-Seas House, St. James's, S.W.1, when an address was given by the Most Hon. the Marquess of Reading, CBE, MC, TD, QC, Minister of State for Foreign Affairs. The Rt. Hon. LORD HAILEY, PC, GCSI, GCMG, GCIE, presided.

The CHAIRMAN offered a cordial welcome to Lord Reading with exceptional pleasure because he had the keenest recollection of his father's Viceroyalty and the unfailing kindness and courtesy which he showed to the members of his Council. The present Lord Reading had some of his father's characteristics and he had watched him making progress in official life and he now held a responsible post as Minister of the Crown.

Lord Reading was to talk about the Colombo Plan. Like a great number of other people he found it a little difficult to unravel the intricacies of the Plan, but he had no doubt that Lord Reading would be able to do so.

The Most Hon. the MARQUESS OF READING: It is a privilege and an ordeal to sit under the chairmanship of Lord Hailey, to whom I am most grateful for what he has been good enough to say in introducing me. A privilege, because it must be that to anybody who has any connexion with India; an ordeal, because I remember that my father said not once but many times that of all the profusion of talent which was at his disposal for advice during his Viceroyalty, Hailey was the wisest of them all.

You have asked me to talk about the progress of the Colombo Plan and from that point of view I do not want to go too much into the history of the past and how it developed, but rather to confine myself to the advance that has been more recently made. I have this advantage over you that it so happens that the Report prepared by the Ottawa Conference in October has not yet been published, but will be published within the next 48 hours, so that I can retreat behind the cover of the still confidential character of that Report if there are any questions which I desire to evade. At the same time, I cannot pretend that the Report contains matter so

sensational that if I release any of it in the course of this talk it will afford any outstanding "scoop" to such members of the press as may be here.

The fact is that the Colombo Plan has only caught the imagination of press and public in this country to an unfortunately limited extent, yet it has a great imaginative appeal. It is not uninteresting to observe that during the meeting in Ottawa there was a change in the Canadian press and in the attitude of the Canadian people towards the Plan. Canada is a long way from South-east Asia; and Canadian participation derived originally from her membership of the Commonwealth which was, as a body, instrumental in forming the Plan. It may be that many Canadians, when the Conference started, were considerably bewildered as to what it was all about and why it was taking place in Ottawa. But, as the proceedings went on, it was noticeable from reading the press and talking to people that it had kindled a spark in the minds of the Canadian people, who were saying: "Here is something which we can do and we ought to do, and let us help so far as our resources permit us." That reaction was very welcome to those of us who were concerned, and have been for some time concerned, with the Plan.

CHIEF FEATURE

The chief feature of the Plan is that it is not a plan at all, which makes it easier for every one to understand! People are apt to think when they read about it that there is some great overall plan prepared in some mysterious backroom which covers the whole scheme of development for the area of south and south-east Asia; in fact that is not in any way the case. The Plan consists of a series of temporary partnerships between different countries whereby one country makes some contribution to a specific project which another country is about to undertake for its development. So far as these countries are concerned—they take in the whole area of South and South-east Asia—they are largely, in their present constitutional form, new countries. I think it is right to say that, with the exception of Nepal, Siam and the British territories of Malaya and Borneo, all the countries concerned have assumed new governmental forms in the years since the war. From that point of view, of course, they have had a very heavy burden of responsibility to carry in the development of their countries and the raising of the standard of living of the people who inhabit them. It was in order to assist those countries and to co-operate with them in the raising of the standard of living that the Colombo Plan came into being in January, 1950, at a meeting of the Commonwealth Foreign Ministers (except South Africa) which took place at Colombo. It was from that meeting that the Colombo Plan was born.

These countries have, as I have said, been confronted with really colossal tasks and the wonder is that they have made such substantial progress as in fact most of them have made, although the degree of progress varies inevitably and considerably between the different countries. But they have recognized themselves that they can well use help from countries who, by force of circumstances, have had wider and longer experience of the process of development—help, financial and technical which is neither tutelage nor patronage, but co-operation between peoples.

I think that the Colombo Plan has been a remarkable and successful experiment in collaboration between eastern and western countries. The material achievements have already, subject always to inevitable limitations, been very remarkable and, in addition to the material achievements, it has had, in my view, an immense psychological value. I am not sure that that is not the most valuable consideration of all.

In 1950 these various countries, again with differences of degree, were battling with the problems with which they had been left owing to the new constitutional status which they had acquired and to the ravages in their economic system made by the years of war. It was necessary for them to look ahead and to contemplate the conception and execution of very large schemes of development, if they were to bring their countries up to the standard of other more prosperous countries. I think the psychological influence of the Colombo Plan was that it gave a start, a stimulus to planning in that very vital area. There arose a sort of infectious competition between the various countries to see, according to their different status, how far they could advance upwards consonant with the resources at their disposal. It turned their minds to acquiring what is not easily acquired without previous experience, the technique of planning on a very expansive scale.

That stimulus having been applied, the countries of the area turned their minds to those very great problems which confronted them. And if one asks oneself what would have happened if there had never been a Colombo Plan, the only answer is that the very expansive major achievements of the last few years would not have been completed and maybe not even undertaken because of the lack of knowledge, lack of incentive and lack of resources from which many of these countries suffered.

They have learned not only the technique of planning, but they have realized one very important element in any planning and that is the immense value of fixing priorities. It was no good launching into a dozen or score of schemes simultaneously when it was clear that it would only be possible to carry out perhaps half a dozen. Before launching into this kind of undertaking the rate at which these schemes will be undertaken must be fixed so that such resources as are available can be

used—they will always be inadequate!—for the undertakings which have a greater immediate value.

PURELY COMMONWEALTH CONCEPTION

As you know, this was originally a purely Commonwealth conception, but it was always contemplated that other countries of South and South-east Asia should come in at the receiving end. It is open also to other countries if they wish to come in at the giving end, not only with finance but with experience and technical knowledge as well, giving encouragement to the countries which are striving to build up their economies. There have now come in at the receiving end all the countries of South and South-east Asia. The list was completed at the recent Ottawa meeting by the election of Siam and the Philippines who up to then had attended, although a little intermittently, merely as observers, but who put forward applications for full membership. Those applications were warmly welcomed and readily granted by the other countries concerned. Japan also came in, not in the capacity of a receiving country but as a country whose contribution to the Plan was likely, in any case for the present, to be confined to the provision of technical assistance. Japan has, of course, considerable wealth of technical knowledge, agricultural and industrial, which might be of very real value to the other Asiatic countries concerned.

The non-Commonwealth countries are certainly not regarded by the Commonwealth members as in any way stepchildren in this scheme. We have told them repeatedly, and I think they fully realize, that they are all on a basis of complete equality with the Commonwealth countries when requests for help are being considered.

As regards the Ottawa meeting, having had some previous experience of these meetings, I think the remarkable thing about it was the high level of representation of most of the countries compared with the meetings of a year or two ago. Almost all the countries were represented by their Finance Ministers or their Foreign Ministers. The meeting was thus more authoritative than it would otherwise have been, because they were able to put forward views without frequent reference to their governments and to take responsibility for decisions.

In addition to the delegations of the member countries, according to what is now a precedent of several years, a representative of the International Bank for Reconstruction and Development attended the meeting. The Executive Secretary of the Economic Commission for Asia and the Far East also attended. The Commission is the United Nations economic body concerned with that part of the world—concerned in a different

way (which I have not time to elaborate now) from the Colombo Plan. It is mainly interested in more theoretical studies of conditions in the area which are of great value in their planning to the countries which are carrying out development schemes.

The Conference was, I am glad to say, conducted on an extremely friendly basis. Perhaps the social aspect of the Conference almost left us inadequate time for the working portion of the day; nevertheless I think it is right to say that the Asian countries went away from that Conference very satisfied with the result. But I am not saying that they got from it everything that they might have expected or that they could use.

I ought to make it clear that just as there is no plan so there is no "community chest" into which the contributing countries pour such funds as they can devote to this object and which are handed out by some governing body to such schemes as are for the moment favoured. All the schemes which are carried out between the different countries in partnership are not only carried out bilaterally between the countries concerned, but bilaterally managed. For instance, the New Zealand Government has been helping India in the construction of hospitals; and the Australian and Canadian Governments and the International Bank for Reconstruction and Development have been helping the Pakistan Government in the development of the great Thal scheme in the Punjab which is now nearing completion. But it is dealt with on a bipartite basis between countries, and is not in any way controlled centrally.

The basis and scale of development vary immensely in the different countries, and it is perhaps inevitable that to some extent India, by the mere size of her territory, the numbers of her population, and perhaps also because of her greater administrative experience dominates the Colombo Plan. On the other hand, there is a country like Indonesia, the size of which is sometimes liable to be forgotten. With 80 million inhabitants, it consists of a vast number of islands scattered over an area which, in Europe, would extend from this country to Asia Minor. To countries like Nepal, the Associated States of Indo-China, financial help from outside countries who are prepared to come in and discuss with them where and how they can assist, is of the greatest value. That financial help takes various forms. It takes the form of loans, of grants, of bank credits. From their side the countries which are carrying out the development make their contribution from their internal resources, from their respective exchequers and, increasingly, by the mobilization of capital. Further, most of them are anxious to see foreign capital come in and be invested in their development schemes.

There are, therefore, all kinds of different financial arrangements in varying undertakings. For instance, one of the most multifarious arrangements is connected with the new Sui Gas Scheme in Pakistan whereby the natural gas recently discovered in Baluchistan is to be piped to Karachi for industrial and domestic use. That is a long-distance and an expensive undertaking and, in addition to the Pakistan Government's contributions this country has agreed to release a contribution from its funds in the International Bank, and the fairly recently founded Commonwealth Development Finance Corporation is making its contribution; so private finance is assisting as well as public. There you have welded together in one operation all these various sources of financial supply.

MAIN CONCENTRATION

The main concentration of effort is still, and I think rightly, on the three outstanding requirements of agriculture, power and transport. It is a struggle for most of these countries, perhaps for all of them, because, striving as they are to increase the standard of living of their existing inhabitants, they are also perpetually confronted with the problem of the increase of population due on one hand to a rising birth rate and on the other to a falling death rate. I do not pretend that for the moment it is not a very considerable battle to keep pace, on the existing standard, with that rising population, let alone get so far ahead of the problem as to be able substantially to raise the standard. There are, I think, increasingly propitious signs. Only the year before last India produced five million tons more food grains than in the previous year, and this year eight million tons more. It may not be so much among the vast population of India but it is a step forward and shows what can be done. Malaya is the first example of a country in which the increase in the production of foodstuffs is outstripping the increase in population. To that extent they are now ahead of their problem and one would hope that with the return of more peaceful conditions they would be able to begin the real task of raising the standard of living of their people.

Another important matter is the spreading of their economic risks. Many of the countries have been for years concentrating upon one or two major primary products, in Pakistan cotton and jute, in Ceylon tea, coconut and rubber, and in Siam, Burma and Indo-China rice. That means that, if anything goes wrong with the crop from natural causes or if something goes wrong with the market, the whole economy of the country is upset. Countries are beginning to increase the range of their products and are not devoting too much of their ground space and their attention to one or two particular things. You will find that Pakistan

has quite considerably reduced the area of jute and increased the area of foodstuffs.

The sort of schemes that these countries are undertaking perhaps may be of interest to you, because there is always greater interest in concrete examples than in abstract values. Most of them are intended to increase food production. Major irrigation schemes have been carried out. Some of them, particularly in India and Pakistan, were started before the Colombo Plan, but it may well be that the Colombo Plan has helped towards their progress and completion. In India over the last two years a million and a half acres of new land have been opened up, in Pakistan the irrigation project of Thal has been almost completed, and it has brought another 325,000 acres into cultivation and the settlement of 70,000 persons. Settlement has been an integral part of many of these schemes. With the number of refugees with which India and Pakistan had to deal there was a substantial problem, and it has been the effort of both countries, when dealing with schemes of irrigation and development, to think of them as communal schemes. That is, not merely to build a generating station but to begin to build towns in which the people could live and start to make their livings simultaneously with the coming into operation of the generating scheme and all its effects. Better seed, better fertilizer, more irrigation have from the agricultural point of view already done a great deal.

So it goes on in many fields, in public utilities, power development; there is an enormous multifarious scheme at Bhakra-Nangal in India and the whole canal system was recently opened up. Pakistan has now finished several thermal power units, power development in Ceylon has risen, Singapore has greatly increased its power capacity, and India has expended a vast sum in rehabilitating her railways. Enormous numbers of locomotives, freight cars, passenger and baggage cars and so forth have had to be built and brought into use. The Pakistan railway rehabilitation scheme has also cost something like 160 million rupees. Road building is being undertaken in the same way. Burma has been reconstituting her sea-ports which were badly damaged during the war, Pakistan has greatly increased the loading capacity at Chittagong. So progress is made in all these different fields; that is the satisfactory aspect of it.

It is, I am afraid, right to say that financially the gap in the last year has widened between the determined programme of development and the amount of finance available to carry it out. On the other hand, there are growing signs of greater American interest in the Development Plan. America has been a member of the Consultative Committee of the Plan since 1951 on the distribution of resources to the Colombo Plan projects.

TECHNICAL ASSISTANCE

I want to say a word about the immensely important aspect of technical assistance. Perhaps it is in this way, from some points of view, the greatest returns can be achieved. The amount of money that could be devoted to the area is so large that it is unlikely to be forthcoming for some time. But there is an immense amount that can be done at less cost and with enormous results from the provision of technical assistance. So far something like 5,000 students from the countries in South and South-east Asia have come to the donor countries for training. That sounds like a big figure, but if you set it against the enormous populations it is not so very much. The other way, some 2,500 technicians have gone out from here and other donor countries to the area in order to teach people on the spot. It is not possible to measure the success of technical assistance merely by these numbers because each of these individuals is a generating station of knowledge in himself. When he returns from the western countries he should be able to teach other people what he himself has learnt. People who come from the western countries and instruct on the spot have very much larger audiences available to them. I think we shall eventually get a greater division of technical knowledge throughout these countries. That, they are the first to admit, is one of the main things they require.

I do not mean by "technical knowledge" scientists or engineers alone, valuable as they are. The need goes right down to the skilled artisan, the man who is capable not so much of constructing the machine as of seeing that it runs smoothly once it has been installed. It is no good spending vast sums on the setting up of great undertakings if there are not the people to run them. Therefore, the training of the skilled foreman is most important in these countries. I think all the countries, certainly this one, have taken a very elastic view of what is meant by "technical assistance." It has gone outside the field of pure science. It has been arranged for people who can teach English to be made available and for very valuable teams of surgeons to tour some of these countries demonstrating the most modern method of carrying out operations, and valuable measures of that kind. In that way the western countries have made a valuable contribution.

There is a special Technical Co-operation Bureau in connexion with the Plan in Colombo itself in liaison with United Nations Technical Assistance. There are also United States technical assistants in Colombo who keep in touch and avoid duplication. A commission has been set up to collect from the various countries information on the progress of the Plan and to disseminate it to the peoples of the world.

The Colombo Plan has gone a considerable way in the period through which it has existed. It was a six-year plan from 1951 to 1957. It is now half-way through its course and, looking back on it, those who have been responsible in the various countries, can congratulate themselves on the advances which have been made. One thing is also clear. The Plan has gathered in the course of the years such a momentum that it will not be possible, even if it was desirable, to bring it to an end in 1957. In some form not yet decided it will in all probability have to continue after the original date of termination has been reached. So long as it performs a useful function, one cannot see it brought to a close within so short a time as three years.

COLOMBO PLAN ENTHUSIASM

The Colombo Plan induces a peculiar type of enthusiasm amongst those who have any contact with it. I confess that I have in the course of my connexion with it over the last three years become a considerable enthusiast. And I hope that what I have said to-night may have enthused some of you, when the formidable and severe-looking White Paper which contains the Colombo Plan Report is published, to feel disposed to buy a copy and look through it for yourselves and form your own judgment whether or not this undertaking is not performing a very real service.

What is so necessary in that part of the world, not just for our own strategic and economic needs, but for the countries themselves, is a period of settled and stable progress, both economic, political and social, and it is in the hope of giving some measure of stability to these countries that the Colombo Plan was launched and has been carried on.

In common with a good many other people in this room I have recently been reading a book called "The Men who Ruled India." While I was reading it I wondered what the reaction of those men would have been to the Colombo Plan ; what the Bartle Freres and Sandemans of a past world would have thought if, after giving their lives to building up those countries with generally very inadequate tools, largely using their own initiative, their own drive and their own responsibility, they saw the massive schemes which are now taking shape in so many of the countries they served. I came to the conclusion, rightly or wrongly, that they would have welcomed it because the purpose which all associated with the Colombo Plan have in mind is progress, stability, order, prosperity and happiness in the different countries of the world. After all, however much the various schemes may be from some angles matters of high policy which are above the head of the peasant or the factory worker, yet, in the end, it is the application to the individual man or woman

by which they are judged and if, as I hope, plans such as these do filter down to the individual man and woman and thereby give them a fuller, freer and fairer life, I think that would be something which would most warmly commend itself to the men who ruled India and who, in doing so, did so remarkable a work.

Some Health Problems of India and Pakistan

**By Lieut.-General Sir BENNETT HANCE,
KCMG, KCIE, OBE, IMS(R)**

A JOINT MEETING of the East India Association with the Pakistan Society and the Over-Seas League was held at Over-Seas House, St. James's, on Wednesday, 22nd September, 1954, when Lieut.-General Sir Bennett Hance, Medical Adviser to the Secretary of State for Commonwealth Relations, gave an address on "Some Health Problems of India, Pakistan, and Ceylon." The Chair was taken by Sir Henry Holland, CIE, FRCSE.

The CHAIRMAN, in introducing the speaker, said that it was a great pleasure to take the Chair on this occasion for his old friend J. B. Hance. He met him in India thirty years ago, and the friendship then formed had endured ever since. They all knew his distinguished career. He had held almost every office he could hold in the Indian Medical Service, and in India and Pakistan to-day they realized what was owing to him. Some very brilliant men had been in that Service, men whose names added lustre to the medical profession. He recalled meeting the speaker in Jodhpur in 1925. He was the means of introducing to him (Sir Henry Holland) some distinguished Indian patients for ophthalmological treatment, and more than one of these was "touched" to the amount of Rs. 5,000 or so for his mission hospital. Afterwards Sir Bennett went to Mysore, where he spent seven years, and from then onwards it was not a gradual but a very rapid ascent to the DGIMS. They were all most delighted at the honours which had come to him. Among his other qualities he had a great sense of humour, and he shared with the speaker a love of angling. One of his stories was of three surgeons salmon fishing in the river Wye. Two of them, using ordinary bait, were unrewarded, but the third had a fine catch. This surgeon, who had recently operated

upon a noble duke, when asked what bait he had used, replied, " Don't tell any one, it was the duke's appendix ! "

Sir BENNETT HANCE said: I am most grateful to my old friend, Henry Holland, for the kind things he has said about me. It is one more expression of a friendship which has, for me, been a valued privilege for nearly 40 years; and, like most good things, its value has grown with age.

This paper aims at being a summary of impressions gained on a mission which was concerned solely with matters of health; and though I have tried to temper the medical monotone by bringing in general impressions where possible I fear it remains rather severely medical.

I take my text from part of the inaugural speech to the Committee which bears his name, and to which I shall later refer, of that distinguished Indian administrator, Sir Joseph Bhole. He said: " In any country—and especially in any Eastern country—health is fundamental." It is! In the last analysis the prosperity—indeed the survival—of any country depends upon two factors: its capacity to defend itself and its capability of supporting itself and paying its way in a competitive world—in short, its productivity. Both factors are directly dependent on the health of the population, since neither can be at its best if that health be undermined by disease, especially preventible disease.

All the countries visited had, and have, their urgent preoccupations with preventible disease; and I was concerned primarily to see how far they needed, and desired, our help in their efforts to meet the challenge.

My tour was most instructive and of compelling interest. It comprised India, Pakistan, Burma and Ceylon. But when it was written and pruned it was quite obvious that the whole ground could not be covered in any time that it was reasonable to inflict on an audience—even in a summary—in such a way as to do justice to the countries reviewed. I have therefore decided, in view of the fact that most of my audience are primarily interested in India and Pakistan, to confine my remarks this afternoon to those countries. To those of you whose interests are in Burma and Ceylon I can only apologize sincerely. I found so much, and of such intense interest in those countries that I have omitted them with great reluctance. I can only make some slight amends by telling you that my impressions will be published in your proceedings along with what I say this afternoon; and I apologize sincerely to those of you who may feel you have been brought here under false pretences.

In all the countries I visited there has been in some respects a notable advance in appreciation of and provision for the health services, civil and military. In others deterioration from what we knew and strove for is equally definite. Of the former aspect I can speak with freedom and

with pleasure; regarding the latter, it was no part of the mission with which I was entrusted to criticize unless specifically asked to do so. And if, in what follows, I give expression to what may sound critical, you may be quite sure that what I say here has been said, by request, to the administration concerned; and said in a spirit meant to be both constructive and sympathetic.

It must always be remembered that in two of the Commonwealth countries I visited, their economy has been bedevilled by their mutual relations, and that funds that could have been profitably spent on health and other nation building activities had, in their view, to be diverted to the armed forces and to the refugees. In the circumstances I can only record my admiration at the progress that has been made in the health field.

TWO GENERAL IMPRESSIONS

Before going into detail of the places I visited, there are two impressions of general application which are very vivid. The first is the fantastic rate of growth of the residential areas of all the cities I visited. The nature of my brief limited these in the main to Central and Provincial or State capitals; and the centripetal attraction of the capital cities has to be seen to be realized. Speculative building is the order of the day; and much of the construction struck me as very modern and not of a character that would attract me as a residence. Blocks of flats, admirable in style for Wimbledon Common, are not necessarily desirable residences in the Indo-Gangetic plain or in the Punjab or Eastern Bengal. It will, I think, take some time for a balance to be struck between the "modernistic" and the utilitarian. In the meantime the occupiers have my sympathy.

The second impression is a corollary of the first. It is that this rapid expansion is outpacing the provision of the civic services which every modern municipality aims at providing to its inhabitants—water supply, sewerage and sewage disposal, and pest and insect control. This is true to a greater or less extent of all the cities I visited. It is an especial problem in the cities of Northern Pakistan where the cities concerned are ancient and crowded, and the introduction into them of modern civic amenities entails vast and expensive engineering projects. It is, perhaps, less so in the coastal cities where modernization has been in gradual progress for a considerable number of years. But in all of them the problem exists with some urgency and is making an insistent and appreciated claim on the Governments and authorities concerned.

After a preliminary stay of a week in Karachi, to which I shall refer later, I flew on to Delhi, where I spent a fortnight.

I visited Delhi in the latter half of January and again for a few days towards the end of March. New Delhi itself and the old city had very much their war-time look; the "temporary construction" round the Secretariat and on Man Singh Road still remain. But the suburbs are changed almost past recognition. In the neighbourhoods of the Purana Qila and Safdar Jang new speculative builder's paradises have sprung up, the former dignified by the name of Sundar Nagar, presumably after Sundar Singh, the millionaire builder and contractor who pioneered the development of the area. A large area at the southern end of the Ridge in the neighbourhood of the road to Cantonments and Palam Airport has been set aside as a "Diplomatic Colony" and many missions, including the British, have taken up sites there. All along the Rohtak Road and in the mill area to the west of the Ridge expansion is taking place as fast as construction can be pushed through.

While this is inevitable—for the population of Delhi, which pre-war was, I think, 5 lakhs and during the war 7.5 lakhs, has now grown to 1,800,000 and is still increasing—it has its repercussions on the health of the locality. The large labourer population involved is hard to control; many of them camp on or near the sites on which they work with very exiguous sanitary provision and form potential foci of infection.

This being the case it is surprising that the health control is as efficient as it is, although it cannot be claimed that it is in all respects up to pre-partition standards. The water-supply, a constant worry during the war and until recently, has now been assured at a suitable level of 40 gallons per head per day. Mosquito control, after a temporary lapse about 1948, is now back, under the eagle and efficient eye of Colonel Jaswant Singh, to its previous high level. But, as elsewhere, the housefly is ubiquitous and, again as elsewhere, is apparently developing D.D.T. resistance. Sewage disposal is still an anxiety, but a comprehensive plan for sewerage parts of the city and surrounding townships which as yet lack this provision is being put into effect as fast as possible; and I was informed that it is estimated that in three years time the back-lag will be made up and thereafter sewage provision will march step for step with building development.

My stay coincided with "Republic Day," the anniversary of the proclamation of the Indian Republic; and a full ceremonial parade and march past took place on the vista, the salute being taken by the President, Rajendra Prasad, before the whole "corps diplomatique" and an enormous crowd.

I wished devoutly that all my friends who had served in the Indian Army could have seen the Presidential salute and march past. The most exacting sergeant-major in the Brigade of Guards would have found little,

if any, scope for criticism. Nor was the old time pageantry left out. The march was led by the Kashmir Lancers, very well mounted, and the turn out of horses and men was first class. They were followed by the Bikaner Camel Corps in full dress, a most colourful sight. Then came representative contingents of the Indian Armoured Corps, the Indian Artillery, the Infantry, and the Medical, Veterinary and Women's Army Corps, and each contingent had its band or pipe-band.

The Army was followed by detachments from the Indian Navy and Indian Air Force. The former nearly stole the show by virtue of their magnificent Sikh drum-major who, however, turned out on inquiry to be an ex-soldier! The naval turn out and marching were the equal of any and, if one may be critical for a moment, rather better than that of the Air Force. But the palm of the day went to the women's contingent of the army, whose marching and bearing were faultless and whose colourful and picturesque uniforms were a delight to the eye.

The military parade was followed by a "Pageant of the States." Articulated lorries were decorated by scenery and manned by people representing the characteristic features of each State. There were the boats and fishermen of Bombay, the temples of Madras, the wheat threshers of East Punjab, and many others which time does not permit of recalling. But the memory which is most vivid with me is that of the contingent from Madhya Pradesh (old C.P.) and Madhya Bharat (old Central India Agency). The former featured an enormous orange, with representative peasantry, and, most picturesque, a party of dancing Gonds, who were thoroughly enjoying themselves. The latter featured the tiger, and also a party of dancing aborigines—this time Bhils mounted on stilts; and how they managed, literally, to "keep up" in the moving lorry passed my comprehension. In the evening there was flood-lit folk dancing in the Irwin Stadium where the Bhils again performed, and stole the show.

Altogether, at the end of the day one was left with the impression of military efficiency and a vigorous national spirit, spontaneous and deep-rooted; and one was pleased and proud to note that they had preserved, unimpaired, much of the heritage which we had bequeathed to them while supplementing it with a purely indigenous ceremonial of great significance and artistic value.

ALL INDIA MEDICAL INSTITUTE

Turning to health matters, many of my listeners will remember the Health Survey and Development Committee, better known perhaps as the Bhore Committee, after its distinguished Chairman. It was set

up in 1944, and reported unanimously in January 1946 giving a survey of health conditions then existing and making recommendations for future development of the institutes and services connected with health.

One of these recommendations was for the setting up of an All-India Medical Institute to provide the training of the potential teacher of medical sciences, of which India stands so sorely in need if sufficient medical personnel are to be trained to give adequate health cover for her population. It was emphasized that the staff and students of this institute should be most carefully chosen, the latter hand-picked for academic merit and personality, and the former the cream of the medical world.

After partition the funds needed for military and refugee expenditure left nothing over for so ambitious a project; but one is happy to know that recently the Government of New Zealand have made a grant of £1 million sterling for this express purpose which has enabled the scheme to be brought out of cold storage and taken in hand. I was privileged to see both the site at Safdar Jang and the proposed lay-out; and an architectural competition for the best detailed plans was being organized while I was there. There is little doubt that excellent buildings will be provided, and, as usual, the most serious problem is the staffing and equipment.

It is most devoutly to be hoped that the Government of India will follow the example of the founders of the prototype of the Institute—the John Hopkins School of Medicine at Baltimore—and, in this one instance, abandon all ideas of nationalism, and comb the world markets for the best talent procurable. Only the very best is good enough if the Institute is to fulfil its purpose, and only the best should be chosen irrespective of nationality. Nor, again in this one instance, should the usual programme of a limited engagement during which Indian successors are trained, be followed. Selected staff should be encouraged to make it their life's work, for nothing less will set and fix the standards. Indian staff will follow in the natural course as the graduates of the Institute prove themselves. It is of course understood that the Director must from the beginning be an Indian, and there are at least three men who are qualified for the post by any standards. It may well be that the heads of one or more departments, chosen on their merits from a world-wide field, will be Indians also, but it is safe to say that India cannot provide men of the essential calibre for all.

The directive of the John Hopkins was “select your men from the very best, and then build round them.” All friends of India will hope that this also will be the directive governing the staffing and equipment of the Institute.

From Delhi I flew on to Calcutta and noticed little difference in its appearance since my last visit in 1946. The Maidan and Chowringhee still have their war-time look, and Writers' Buildings were quite unchanged. Certainly I saw no evidence of a change of heart in the Calcutta Corporation. Environmental hygiene, never their long suit, has not improved; and any difference noticeable is in the opposite direction.

The Bengal Government on the other hand, under the spirited leadership of that human dynamo, Dr. B. C. Roy, has an admirable and well planned scheme of expansion of medical education. The old Campbell Medical School has been raised to university status under its new name, the Nilratan Sirkar Medical College, and in addition now houses an efficient thoracic surgical unit.

The Presidency General Hospital has also been made the centre of another medical college, and there I saw the beginning of up to date units in neurology and in cardiology and diseases of the circulation. These departments are under the direction of well qualified men in their early professional prime, and wide freedom to develop their talents in their own way has wisely been left to them.

The All-India Institute of Hygiene has been notably expanded and, in conjunction with its field unit at Singur, maintains its high reputation for research and training in preventive medicine. The same applies to that fine institution, and monument to Leonard Rogers, the School of Tropical Medicine, under its able Director, Dr. Chowdhri, where I was privileged to see some high grade research in progress. It is also one of the bases for the WHO cholera inquiry, and research on the pathology and treatment of leprosy under Dr. Mahendra is of a high order.

Another welcome innovation is the Cancer Research Institute which has been set up close by the Chitta Ranjan Seva Sadan. The equipment was provided by that original and enthusiastic millionaire, Rai Bahadur R. P. Shaha, of whom I shall have more to say when we come to Dacca, and includes the latest deep therapy plant and radium. In addition to providing much needed treatment for malignant disease, I was told that valuable research work is in progress, both fundamental and applied.

Those of you who have served in Bengal will also be interested to know that since the taking over of the Presidency General as a teaching hospital the European business communities have formed an Association called the East India Clinic Association; and plans are now well advanced for a 60 to 100 bedded modern air-conditioned hospital on a site which they have purchased in Alipore.

After a crowded and interesting week I left Calcutta and flew to Dacca, on which I shall report when we come to consider Pakistan.

My next call in India was at Madras, and if I devote less space and time to that enlightened State than to other places it must not be inferred that it is due to any lack of the spirit of progress; the exact reverse is the case.

Physically the Madras we knew and the Madras I saw has altered singularly little. It always—or at least as far as I knew it—was a spacious, almost a garden city. Bombay and Calcutta exude business: in Madras it always struck me as almost a surprise to come across the evidence of a shrewd, far sighted and public spirited business community. The ogre of speculative building, though toned down, exists; but it affects the outskirts to which my occasions seldom took me. One thing, however, that Madras could learn from Bombay and Calcutta is the virtues of a silent zone. The noise in Georgetown has to be heard to be realized!

From the health angle there is less to be reported than elsewhere. This is due to two factors: the excellent standards which have always governed the Medical College and the General Hospital, and also to the fact that in the time at my disposal I could not see as much of the mofussil as I should have liked. I heard of new colleges set up in Madura and Coimbatore, and of course, in Trivandrum, which in any case is not Madras, but was unable to see them at first hand.

The object of my mission took me, as far as the mofussil is concerned, only to Vellore and to Arogyavaram. In the former place I saw the young Christian Medical College, which will always be associated with the honoured name of Dr. Ida B. Scudder. This fine young school, in addition to providing undergraduate medical education of a very high order, is leading India in thoracic surgery; and a young British orthopaedist is making surgical history in the treatment of the deformities of “burnt out” leprosy.

In Arogyavaram, better known as Madanapalle, that able son of a pioneer father, Dr. Johannes Frimodt Möller, has organized an integrated attack, both preventive and curative, on tuberculosis which has brought his institution Government recognition as an all-India postgraduate training school and made it also the Mecca for tuberculosis workers in S.E. Asia.

I have always admired Madras and the Madrasi, and I left with the conviction that, as in the past, so in the future, competitors will be hard put to it to oust him from his leadership of medical progress in India.

B O M B A Y

In Bombay I was unfortunate in that the indisposition of the Surgeon-General prevented my seeing as much of the developments of the health programme of the State as I should have wished, or as I otherwise could

have done. My time was fully occupied; nevertheless, with other aspects of my mission which however would not be of much interest for the purpose of this address.

The Fort and the city areas have changed singularly little; but as one drives north through Worli, Pali Hill to Santa Cruz one sees the same fantastic rate of building that one had noticed elsewhere. This, as in Karachi and elsewhere, has spread round and engulfed pre-existing villages and hamlets, the persistence of which in built-up areas must provide the authorities with a pretty public health problem.

I was informed that there is still an ample water supply from the Tansa lakes and that the treatment was as efficient as ever. On the question of sewage disposal, this is still carried on at the big sewage farm near the Worli sea face; but I derived the impression that the latter was under considerable pressure. I should not be surprised to learn that some of the emergency storm-water drains discharging into the sea had occasionally to function as over-flow sewers; but I have no exact information on this point. An indication, however, that sewage contamination can occur is given by the undoubted increase in the incidence of amœbic dysentery, infective jaundice and poliomyelitis among the European and well-to-do Indian population, which competent observers agree is a real increase and not due to better and prompter diagnosis.

On the side of progress I heard of two striking examples. The State Government had set aside certain hyperendemic areas in Baroda, the Deccan, Konkan and North Canara for an experiment in malaria control by residual spraying with D.D.T. Their problem was not so simple in that there were more than one vector species of mosquito with which to reckon. Nevertheless I was assured that virtual control had been achieved and that, in consequence, a State-wide campaign on similar lines was about to start.

The second evidence of progress was a comprehensive project to provide the cities and townships of Gujarat with a safe water supply by barraging the Tapti and Narbudda rivers and the delivery to them of filtered chlorinated water. Villages on the pipe-lines will be served as well; and for those off the pipe-lines an ancillary scheme of fool-proof wells and piped delivery has been worked out. The project is vast, and great vision and energy have been expended on it. The money, I understand, has been budgeted for. I have seen enough of the results of vision, enlightened finance and determination to be sanguine of the success of this project also.

No mention of Bombay would be complete without some reference to the Tata Memorial Cancer Research Institute under the inspired guidance of its Director, Dr. V. R. Khanolkar. Here I found not only

"straight" cancer research of great importance but also, as its by-products, fundamental inquiries in bio-chemistry and genetics of great value and, as a sort of relaxation, work on the mode of infection in leprosy which, if confirmed—as seems likely—will be quite revolutionary.

KARACHI

I visited Karachi three times, on arrival, en route from Bombay on my final trip to Delhi and for 10 days prior to leaving for home. On the first occasion I had the misfortune to arrive sick, and much of my programme had to be postponed. What follows is therefore a condensation of impressions gained on all three visits.

The first impression gained by a visitor arriving by air is that of a well-planned, commodious and efficient airport at Drigh Road some eight miles inland from Karachi itself. The next impression, and the most vivid and lasting of all, is the fantastic rate of growth of the place. In 1945 the population was somewhere about 350,000. To-day it is well over 1,500,000, and still growing. When I called there in 1948 I was struck by the wisdom with which they were handling their refugee problem by zoning the refugee camps on the periphery of the city. To-day that benefit has been lost; for speculative building has spread out and surrounded the refugee settlements which are now acting as little nests of infection in these rapidly expanding suburbs. Moreover, I was not struck with the type of construction which is fashionable—villa residences in small compounds, more suitable to the Riviera than to a semi-tropical seaport, and blocks of flats, often incorrectly orientated to the prevailing breeze, which have all the defects of the similar construction elsewhere and to which my remarks on the latter apply with equal force. This type of building is going up all round Karachi, notably on Drigh Road almost as far as the airport and in the Clifton area, but generally round the town.

The rate at which building is progressing outstrips that at which civic services can be provided. Water in ample quantity exists in a large lake some 60 miles up the Hyderabad road, where it is treated, piped into the city, re-treated and distributed. But the size of the mains limits the amount that can be distributed; and some of the mains are old and leaky and run in close juxtaposition to the sewers to which the same remarks apply. Major and costly engineering works are needed to remedy the situation, and energetic steps are in progress and more planned to that end; but still expansion outstrips the best efforts at servicing. On many sides I heard the conviction expressed that before long it would be imperative to select another place for the national capital in which

services could run side by side with construction. It was urged that big as such a project was it would be cheaper in money and health than the attempt to graft a modern capital on to a pre-existing city, with the eternal race to catch up; and Canberra was much quoted as an example. How far, if at all, this argument expressed the views of the Government I do not know.

In the meantime existing conditions provide the health authorities with plenty of preoccupation. Amoebic dysentery is notably on the increase and in certain parts malaria, hitherto practically unknown, is invading. The soil is fine clay which holds surface water in pools. The vector mosquito exists and, when there is any rainfall, profits by any shower; while the refugees provide the human reservoir. The authorities are spraying vigorously with D.D.T. and it is much to be hoped that control will be established.

These problems, serious though they are, especially to a medical observer, are in effect teething troubles which must and will be overcome; and I would not wish to over-emphasize them, nor allow them to obscure the sense which any visitor must acquire of a young, vigorous and virile nation determined to give itself the place in the world that is its due. This resolute aim, and the progress towards its attainment, are in my view the more admirable when viewed against the difficulties against which the Pakistanis have laboured. The old Indian administrative services contained notably more Hindus than Muslims, and Pakistan has had to build her administration round a "steel frame" considerably smaller than that inherited by India. Tough, indeed, must that steel be to have provided so much and of such quality. Each officer is doing the work of two and often three men, and while the older men have contributed experience the younger are putting in energy and initiative beyond all praise. Difficulties and drawbacks of course exist. Not every one who at partition was pitchforked upwards to greatly increased responsibility has been able to stand the strain; the weaker vessel sometimes leaks and has sometimes cracked. But the steel frame stands unbent, and the young entry into the civil and fighting services will stand comparison with their opposite numbers of any nation in the world.

One of the greatest handicaps faced by Pakistan at partition was in the field of health and of medical education. Of the nine universities with medical Faculties existing at partition, eight remained in India, and Pakistan was faced with the necessity to provide health cover for 70 millions of people from this foundation. Seven years later Pakistan has four universities with medical Faculties and six medical colleges, and one university faculty and two medical colleges in embryo.

Now it cannot, of course, be claimed that these young colleges are the equals of the older institutions in equipment or that all their staff are the equal in teaching experience of that of the latter. But even with this admission I think you will agree that such progress in seven years is a notable achievement. Nor is Pakistan poor in potential teachers of high calibre. Large numbers of her best young graduates have come abroad for postgraduate study and qualifications, and have returned to Pakistan, taking with them the knowledge and ideals they had absorbed, happily married to their natural intelligence and initiative and are proving, as I had the opportunity of seeing for myself, teachers of great ability. And at least some of the newer institutions are better off in the way of buildings than are the old. The greatest need is for equipment and for the training in large numbers of nurses and technicians. Progress is slow but definite as regards nurses; but the technician problem remains serious.

D A C C A

I had previously visited this East Bengal city only very briefly during the famine, and my memories of it were sketchy; so I came to it to all intents and purposes for the first time. Though it is by no means my ideal of a mofussil station and headquarters of a division, still less of a capital city, I cannot help thinking that it hardly deserves all the hard things which are sometimes said about it. Its chief drawback is that until recently one could not get beyond 10 miles in any direction by road, and travel was largely by water.

But the East Pakistan Government is alive to this and is developing roads, ferries, bridges and fords industriously. The contract has been secured by an Italian firm and the quality of its work is what one would expect from that nation of fine road builders.

The East Pakistan Government is alive to the need for many more doctors, nurses and ancillary personnel, and have already added a Medical Faculty and College to the new University of Dacca. The Medical College is located in a building which started as a Secretariat; and extensive alterations and additions are in progress. It is probably the best immediate solution, but the time is not far off when proper academic and hospital buildings will be required.

An encouraging and impressive step forward is provided by the fine new Public Health Institute, situated on a site five miles from Dacca which is not subject to monsoon flooding, and providing facilities for all the public health services, including the manufacture of vaccine lymph, water and food analysis, drug testing and the manufacture of sera and

vaccines. Equipment will be provided under the Colombo Plan; but the staffing of the Institute constitutes a serious problem, since men with the qualifications and experience required are, to say the least, rare in East Pakistan.

No account of health matters in East Pakistan would be complete without mention of the Kumudini Trust Institute at Mirzapur, a small township in the depths of the country 45 miles from Dacca and at present only reached over a road which is mostly *kaccha*, but which the Italians are rapidly bringing into a highway, and two ferries.

A visit is something of an expedition; but when, with an aching back and mouth and throat parched with dust, the visitor reaches Mirzapur he is in for a surprise. He will find a modern up to date hospital, in general very well planned and equipped, in charge of a well-qualified British physician with an equally well-qualified and capable Sikh surgeon as colleague, and a most efficient and wise British matron in charge of the nurses' training school.

The founder and tutelary genius loci is Rai Bahadur R. P. Shaha—the same man who equipped the Cancer Research Institute at Calcutta, and the whole conception is his as a memorial to his mother. As an example of philanthropic vision it is in a class by itself; and I wish devoutly that I could report that there were no fly in this admirable ointment. But there is. The Rai Bahadur is a man of great vision and energy, but he is also something of an autocrat. This would be excellent if the autocracy did not invade the professional field as it sometimes does.

For example, the wards are models of space and cleanliness, the beds are immaculate and one could eat a meal off the floor, but there is no nurses' sluice room and the dressing trolleys are junk, which make the proper training of nurses difficult and almost impossible. Again, the operating theatre, which contains all the latest gadgets, even too many of them, was obviously designed and sited by a layman without the assistance of a surgeon, anæsthetist or theatre sister. The staff who use it have just got to put up with it; it is what the Founder considered good for them. In these circumstances it is not surprising that one sensed a certain atmosphere of frustration among the professional staff, which, but for their admiration and affection for the Founder, a most lovable man, would have been much more vocal. It explains the staffing trouble which the Institution has experienced; and it is devoutly to be hoped that the Founder will temper his autocracy with wisdom and consider these essentials. The team spirit in his staff is one which he will find difficult to replace; but no professional worker worth his salt will stand indefinite frustration and denial of essentials. The hospital draws patients from all over East Bengal and the quality of the work done is worthy

of the highest praise. It is unquestionably and by far the most efficient hospital in the Province.

LAHORE

I spent the last week of Márch in Lahore and found the city and civil lines virtually unchanged, but the same spate of speculative building on the outskirts. Here, all too often, it has been forgotten that the Ravi and the canals have raised the subsoil water table; and damp courses have been omitted, with the result that the ground floor rooms at least are speedily invaded and disfigured by damp. When it is remembered that the rents charged are inflated, one's sympathy goes out to those who live in such mushroom habitations.

In matters of health the Punjab Government is going ahead. The King Edward Medical Collége and Mayo Hospital remain much as they were. They are an old established and experienced teaching unit, to which the Albert Victor Hospital has been added since partition.

A young and most efficient women's medical college has been built, centred on the Ganga Ram Hospital, a well-planned modern unit of about 300 beds which is being expanded. I was very favourably impressed by the set-up and not surprised to learn that the young ladies are apt to steal the honours at the examinations and give the lads at the King Edward ample cause to look to their laurels.

In addition the Punjab Government are building fine modern hospitals in the mofussil on which, eventually, they plan to base teaching institutions. I was able to inspect one, at Sargodha, and found it on the whole well-planned for the object in view. Additions will be necessary in some respects if and when teaching is taken up there. I left Lahore with regret, with old friendships renewed and my admiration and affection for the Punjabi as strong as ever.

PESHAWAR AND THE NORTH-WEST FRONTIER

I spent the first week of April in the Frontier Province, mostly in Peshawar, but with trips up the Kurram valley and the Malakand. I had last been in the Province in 1945, and my first and most vivid impression on revisiting was one of determined, sustained and rapid development. It is impossible not to sense at once the drive and team spirit of the administration. Paradoxically enough, of all the places I visited in Pakistan it was in that reputed home of the personal vendetta and the blood feud that the hampering effects of personal and political differences and rivalries were least in evidence. Indeed as far as I observed they were conspicuous by their absence.

Industrialization is proceeding apace: oil at Attock and heavy chemistry, fertilizers and sugar refineries at Nowshera and Mardan. It is the obvious aim to process, as far as possible, the results of their own agriculture and mineral resources locally, for the benefit of their own inhabitants first and the country in general afterwards.

I have always had a great affection for the Pathans. In my experience they share with the Anglo-Saxon races, the Persians and the Austrians the capacity to laugh at themselves with genuine amusement. My first visit coincided with that of the Mayor of the American city which has "adopted" Peshawar and proposed to signalize the fact by an exchange of mayors for a fortnight at intervals. He was an impressive figure, complete with gray astrakhan Jinnah cap; and among the festivities arranged in his honour was a torch-light entertainment by the Frontier Corps—Constabulary and Police—consisting of a topical sketch followed by displays of Khattak, Mahsud and Mohmand dancing. The sketch had been written by the Commandant, Frontier Corps, a most talented young man; and not a single public figure escaped his pillory, an experience which they underwent with the utmost enjoyment, which was shared by the large crowd of spectators. As for the dancing, those who have ever seen it will not need reminding what an unforgettable experience it is.

The mofussil, so far as I saw it, is unchanged in general features. But there has been considerable expansion and improvement in the health services. At Kohat an extremely fine modern hospital, the Liaquat Memorial Hospital, has replaced the old civil hospital; and throughout the Kurram and the Malakand new hospitals and dispensaries of modern utilitarian design are going up and old ones being modernized and improved. A planned programme of reconstruction of District Head-quarter hospitals has been drawn up, phased over a period of years, and accepted by the Provincial Government.

I cannot leave the Frontier Province without paying a tribute to the morale and efficiency of both the regular troops and the Frontier Corps. I was privileged to see the former at Thal Fort and was most impressed, and to be the guest of the Political Agent, Kurram, and of the Kurram militia at Parachinar and to see the latter in action and to dine with them after. Old Frontier officers would have been most heartened both by the turn out and bearing of officers and men, as well as to find the old traditions scrupulously maintained.

I left with great regret and the conviction that with its virile and talented people, determined to put it well on the map, the North-West Frontier Province will be second to none in the Pakistan of the near future.

How then shall I summarize the conclusions I reached on my tour? In all the countries I found an awakening appreciation on the part of the

administration to the truth of Sir Joseph Bhore's dictum on the fundamental nature of health. The nature and urgency of the problem varied with the country and even with the province. Some had further to go than others, but all were determined to tackle it; and to do so all would require varying degrees of outside help. To provide this help, in so far as it is needed—and requested—and in so far as they are able, is the task and the privilege of the more fortunate members of the Commonwealth. And I can think of no investment which will provide bigger, if invisible, dividends.

QUESTIONS

A MEMBER asked to what extent India and Pakistan, in facing their health problems, were able to draw upon the facilities afforded by the World Health Organization. Sir Bennett Hance had mentioned this once, in connexion with cancer research.

SIR BENNETT HANCE said that the South-east Asian Bureau of the World Health Organization was located at Delhi, and many projects were being assisted from that source, as, for example, at the moment an anti-tuberculosis project in Madras. The pilot malaria campaign in Bombay was largely sponsored in the same way. In Pakistan the World Health Organization had organized nursing assistance and sent an observer. Very many projects were at present in the planning stage; and Pakistan had to decide to which international agency to apply—the World Health Organization, the Colombo Plan, or the Food and Agriculture Organization. There was plenty of help from the WHO, both *in esse* and *in posse*.

MR. J. P. BRANDER asked how the population question was affecting health. There was now in India and in Pakistan an alarming rate of increase in the population, and the difficulty was largely accentuated by the very laudable success of the medical services and also by the development of the country. But people who were aware of the position knew that the rate of population increase was bound sooner or later to overtake all the possible increase of resources which could be developed either in Pakistan or in India proper, and the success of preventive medicine was making the increase greater than ever. This problem was also to be seen in the British Colonies. Sir John Megaw had devoted his great energies to impressing it upon the Government of India, but with very little success in his time; and the Government of India did not seem to have risen to the situation. What were the views of Sir Bennett Hance and of the medical profession on this tremendous problem as affecting the Indian sub-continent?

SIR BENNETT HANCE said that population pressure was very serious and the situation was undoubtedly as the speaker had stated. Owing, he thought, to preventive medicine the population was increasing at such a rate that sooner or later it would claim the resources of the sub-continent. But it was not accurate to suggest that the Governments of India and Pakistan were not facing up to it. He had had himself a very anxious talk with the Indian Minister of Health, Rajkumari Amrit Kaur, on the subject. But the best person to answer the question would be Sir John Megaw himself, though he (Sir Bennett) doubted whether even he had got the full answer. He was told by Indian scientists whom he trusted implicitly that the knowledge and practice of contraception is spreading into Indian villages. Had he not been told that by eminent men who were qualified to pronounce upon it, he would never have believed it. Every village had its Brahmin, and every Brahmin had a fee for every birth, marriage, and death. Therefore contraception might seem to have little chance in an Indian village. He also had considerable conversation with a certain gentleman in East Bengal, where it was a very serious problem. What the answer was he did not know. On the one hand, the cynic would say that God sent wars and epidemics to India to keep down the population; but that was an explanation which no doctor could possibly accept. For the medical profession to tone down its preventive and curative efforts was unthinkable—and he thought it was unthinkable by the Almighty also.

SIR HAROLD SHOEBERT asked about the incidence of malaria in Bengal. Was it being got down as a result of the efforts made during the last few years?

SIR BENNETT HANCE replied that he did not know. He did not think—this was purely a matter of opinion—that, owing to the political upsets, there had been a really concentrated attack on the malaria problem. He spoke subject to correction, but he was saying what he had observed.

SIR HAROLD SHOEBERT said that some years ago a group of WHO people went there on a definite plan.

SIR BENNETT HANCE replied that if this had gone ahead it had not come within his purview.

The IMAM OF LONDON MOSQUE said that it was his pleasant duty to propose a vote of thanks to Sir Bennett Hance. He was sure that he was voicing the feelings of them all when he said that they had had a most

interesting address by an unchallenged expert in his own line. His account of his recent journey to many places in India and Pakistan had been absorbing. The narrative had been most enjoyable. They had also to thank the Chairman for the way in which he had conducted the meeting.

Educational Problems of India

By H. C. DENT

SIR JOHN SARGENT, CIE, presided at a joint meeting with the Over-Seas League at Over-Seas House on 20th October, 1954, when an address on "Educational Problems of India" was delivered by Mr. H. C. DENT, Educational Correspondent of *The Times*.

Mr. DENT, who was briefly introduced by the Chairman, said: It is indeed a great honour to me to have been asked to address the East India Association, particularly because I do not suppose anybody in this room knows less about India than I do. Two considerations only induced me to allow myself to be imposed upon you. The first is that, as your Secretary said, "you have been there quite recently." The other is that it does not need any one of very keen perception to know the main problems in Indian education after having been there for a short time. Those problems stand out a mile. Since my return to this country I have found it very difficult to summon up a decent amount of sympathy concerning the problems that are being dealt with by our teachers and administrators here. It was to me a profound shock to find a country struggling against so many and various problems as our brothers and sisters in India are doing to-day. If I can do nothing more than warm your sympathy a little more I shall feel that my time has not altogether been wasted.

There is no need for me, in this room, to go into any detail whatever about India's general problems. I want to make first the point, however, that the educational problems have to be related to the aims of the new India. If there are no aims then there are no problems. If the aims are low the problems are relatively low. But the aims of the Union of India are exceedingly ambitious. I quote from the Constitution: "The

general political aim is to make the Republic a democracy based on political economy and social justice, on liberty of thought, expression, belief, faith and worship, on equality of status and opportunity, and, for men and women alike, the right to an adequate means of livelihood." This last is defined in Article 43 of the Constitution as a living wage, conditions of work ensuring a decent standard of living, and full enjoyment of leisure and social and cultural opportunities.

The more I travelled about India the more I realized that that involved a complete transformation, not only of material conditions, but of the thought and attitude of many people in the country. The latter is by far the more difficult task. Hence, of course, the extreme importance of education.

EDUCATIONAL AIMS

The educational aims are, I think, equally ambitious. The immediate educational objectives are, first, universal, free and compulsory education by 1960-61 for all children up to the age of 14. That again is laid down as an objective in the Constitution. My impression was when I was in the country that, regretfully, the complete realization of that aim had been tacitly abandoned by a great many of the leaders. It is indeed impossible to believe that it can be realized. On the eve of independence there were approximately 30 per cent. of all children between 6 and 11—not 6 and 14—in school. Many of them were in school only for one year, 18 months, or two years. Despite the efforts of the governments that had only been raised to some 40 per cent. by last year. Arithmetic, at any rate, appears to be against the realization of that aim.

The second aim is the elimination of illiteracy amongst adults. I cannot find in my papers two figures which agree about the amount of illiteracy, but very roughly the figures for 1952-53 appears to show that about 16 per cent. of adults in India were literate. The illiteracy is, as you know, heavier among women than men; probably some 95 out of 100 of all women in India are illiterate. The other aims are the re-organization of secondary education to give a greater variety of courses, the extension and improvement of higher scientific and technical education, and, lastly and in many respects most important, the revival of Indian culture.

It is a programme which would daunt any but the most courageous. For my own thinking I analysed the problems which faced India roughly into three groups. It is an exceedingly crude division, but it may serve for the purpose of discussion. The three groups are material, sociological and psychological. Over the material problems I need not spend more

than a moment or two. There is the problem of the rapidly increasing population. At the 1951 census the population was returned at about 357 millions. It is estimated now to be approximately 370 million and by 1960 it will touch the 400 million mark. It is increasing by 1 to 1½ per cent. a year. That, of course, has the most tremendous implications for education, because it means that the amount of educational provision to be made simply to keep level increases every year. We have had some little experience of this in this country since the school population in the period 1947-53 increased by some 20 to 22 per cent. But here is a country which has at most only 40 per cent. of its children in school, with a child population far greater in proportion to total population than any in any Western country, and increasing at such a rate that to our problem, which is simply to cope with the increase, is added the problem of providing accommodation for the 60 per cent. or more of the child population without schools at all.

Then there is the fact of ubiquitous and extreme poverty. Again in this audience I need not emphasize that. But no one who has not been outside this country and in Oriental countries can begin to realize what that poverty is like. I remember most poignantly a conversation I had in New Delhi with one of the ablest of the younger administrators there. We were discussing primary education and he emphasized to me that the difficulty was to get material for the children for teaching purposes. I suggested all the cheapest things I could think of. Among other things I suggested the nature table we have in so many infant and primary schools and said that possibly the children could get from their parents or friends cigarette tins for plants. He replied, "My good man, cigarette tins have a high market value." Against such conditions as that one can only bow reverently.

NATURAL RESOURCES

Next comes the question of natural resources. I think people in this country ought to be dispossessed of the idea that India is a country rich in natural resources. I know that it has potential resources which are as yet largely unknown, but I had it impressed on me over and over again that in natural resources the country was not wealthy and was largely under-developed if not actually undeveloped. Agricultural practices are far below what they ought to be in order to produce as much as possible from the land. There is, despite development here and there, still not much more than embryonic industrial development.

Again, when I come to the sociological problems it is not necessary for me to spend much time on them. I do want to emphasize, however,

that I include amongst these the political problems. First among these is the claim of national defence. For some years now India has been spending nearly 50 per cent. of its central government revenue on national defence. That obviously very severely diminishes the resources which are available for education and other social services. One can only hope that the necessity for this heavy defence budget will cease very shortly.

Now I make an extremely controversial suggestion. I mention it with diffidence but cannot avoid it if I am to be honest. In theory the principle of complete State autonomy in education is irreproachable. As a true-born Englishman I am all for local autonomy, and I would defend the autonomy of the local education authorities to the end. But I could not help feeling that, in these very earliest years when a great concerted effort was necessary, probably the jealously preserved autonomy of the States was a handicap to the rapid development of educational advance. I felt that there was not sufficient co-operation between the centre and the States, and between the various States, though I know the centre was trying to promote it as far as possible. I had evidence that Madras, for instance, did not know what Bombay was doing—and did not like it even when it did. There were other cases of friction, too. Again, as one read through the recent annual reports on education one found the names of the same five or six or seven States recurring over and over again whilst others of the 29 States were never mentioned in any of these annual reports as having done anything significant in the way of educational advance. I did feel that one of the great needs of this vast country was for a compelling unity in working together in this and other social services.

Again, there is the vast complex of problems deriving from 2,000 years of history, the multiplicity of languages, national, regional, and local, an equal multiplicity of cultures, a hierarchical system which, although it has been breaking down for a long time, and is obviously disintegrating, is still pervasive in many respects. And, finally, the co-existence of powerful religious faiths with divergent and sometimes antagonistic ideals, though I must add that it did not seem to me that that was presenting the difficulties which one might expect. Indeed one of the most encouraging features was the co-operative way in which Hindus and Muslims were working in this cause and also the co-operative way in which the Christian schools were working.

AN INTRACTABLE PROBLEM

After poverty, population difficulties, and illiteracy I do regard as quite the most intractable problem that India has to face to-day the fact that

we, the British, virtually eradicated the Indian system of education and replaced it by a European one. We replaced it with our own system of education at a time when our own system was nothing to be very proud of. I quote from a pamphlet which Professor Rushbrook Williams wrote in 1940: "A study of the official papers will convince any impartial person that the profoundly important decision to make English the medium of communication was taken because it was considered in the larger interests of the Indians themselves." I break off that quotation to mention that in his Convocation Address at the University of Poona in September 1954, Sir Mirza Ismail said "Let us not forget that but for English education and philosophy with its conception of freedom there would have been no Indian nationalism and no political independence." Now to return to Professor Rushbrook Williams. He says that the theory was that when once the literate classes had been educated, Western learning, of which English was the medium, would gradually filter down to the masses so that eventually every one would be educated and Westernized and as a result every one would become a Christian. He goes on to say, however, that this theory ignored two important realities of the Indian situation. The first was the influence of the caste system which until recently interposed an effective barrier between the classes traditionally concerned with learning and the masses of the population. The second was that the literate class had acquired English for the purpose of taking service with those who for the moment governed the country. The result was the decay of the village school and a dangerous top-heaviness in the educational system.

One could easily spend the whole of this evening on that point, but I do believe that it is crucial for the future of Indian education. The team of which I was a member was sent to investigate secondary education. I should have been much happier if we had been sent to investigate primary education. From figures which have just reached me—figures for the last seven years—there appears to have been a 45 per cent. increase of the population in primary schools and a 60 per cent. increase in the population in higher secondary schools, together with almost a 50 per cent. increase in the population of the universities. Now, of course, I would be the last person to wish to impede the advance of secondary and higher education, but this overbalance which has been the case in India for so many years is at present I am sure impeding progress. It must go on because people desperately want to get their children into secondary education for the reason that that leads to university education and university education leads to a government job—or so they think. I am told, on the word of an Indian authority, the Vice-Chancellor of Rajputana University, that every year 200 recruits are wanted in the

Central Government service—and that 4,000 young graduates just come out of the universities compete for those 200 places. Moreover, of those 4,000, 800 reach a sufficiently high standard to be considered for a personal interview for a post. I was told again—but I cannot verify this—that there were 18,000 unemployed graduates in and around Delhi and New Delhi alone during last year.

Although I am here to talk about educational *problems* I must also just mention *remedies*. I would like to say that I consider the movement for basic education, interpreted on perhaps somewhat less rigid lines than its founder intended, and social education as two of the most hopeful features in the present situation. I should like to see far more effort concentrated on these than in multiplying facilities for higher secondary and university education.

TEACHER'S PATHETIC STATE

Among the problems I count those which have derived from the prolonged struggle for national independence. It surely is a tragic irony that a struggle which in essence was right in every respect should have had this aftermath of unrest and insubordination. Of these results the gravest is the catastrophic decline in the status of the teacher, from the university teacher down to the teacher of the youngest children. The state of the teacher is indeed pathetic. He is miserably paid. He is so badly paid that he has to devote his time and energy outside school hours to doing work in order to keep himself, and his family if he has one, alive. He is so depressed that he has little energy to attempt to better his condition. There is no quick way to advance until India does something very substantial for its teachers at all levels. Another result is the effect on those splendid young people, many of them who are going to the universities, and again I feel this to be an utterly tragic situation. We had the privilege of meeting quite a number of university students, as fine young men and young women as we could wish to meet in any country. They were depressed by conditions over which they had no control and they were facing, at present at any rate, an almost hopeless future. That was one of the reasons that was depressing them most, though they put the thought away from them as much as they possibly could.

My last group of problems I come to with the utmost diffidence, but again I would prefer to be honest and unpopular than to say smooth things. I felt that there are some psychological obstacles to advance. I had the privilege of meeting in India some of the ablest educational administrators I have ever encountered. But they were very few, and

I found, or thought I found, among administrators generally an unwillingness to think out things and to face the implications of their problems.

In the 1944 report of the Central Advisory Board (the Sargent Plan) this is written: "It is inconceivable that within a reasonable period a really national system should be developed or evolved from what now exists or by the methods hitherto followed. The present system does not provide a foundation on which an effective structure could be erected." With one or two notable exceptions I did not find any administrators who had faced that problem, namely, that a radical reconstruction of the educational system, in *ethos* as well as in content and organization, was absolutely necessary, that while some elements of the Western tradition may usefully be incorporated in it, it is an Indian system of education which is wanted.

I do not believe that Indian education will advance on genuinely appropriate lines until that Western tradition has been thrown over or, if you like, until a genuine Indian tradition of education has been established. That is why I see such hope in the development of basic education, and it depresses me to find how relatively slight has been this development. It has not gone ahead like a house on fire as it should have done.

LACK OF RESOURCES

There was a very natural tendency amongst the administrators to be overwhelmed by lack of resources. One could only offer them sympathy. There was a tendency to think that all would be well if a little more money was available. With that I could not have very much sympathy. I found a reluctance to face the language problem. Heaven knows it could hardly be more difficult. It is clear of course that India must have its national language. It is equally clear that local languages should be preserved, but for heaven's sake have some charity for the children who have to learn these languages. Over and over again I said, "But there are many children who are not capable of mastering two languages, and anything less than a mastery of a language is a waste of school time." Yet the Commission whose report we followed up was insistent that every child should learn two languages. Over and above the problem of the native languages there is the devastating question of English. There is no doubt that the standard of English, both spoken and written, is going down. There is no doubt also that English is an extremely valuable international language for any one to know. But not for every one. There are divided opinions about this, but on the whole I feel that they point in the wrong direction, that there is an attempt to offer English to

far too many youngsters when the fact is that it will be wanted by a relatively tiny minority who have to deal with international affairs. The great generality of the people of India will not want English, and I think it is an educational burden which is being imposed on far too many children.

With the exception of the South India Teachers' Union, which is an extremely lively, active and progressive body, it was difficult to find any teachers' association which was as much as in being, except on paper. In any country a great part of the salvation of education must come from the teachers themselves. Then there is a problem on which I personally feel very strongly indeed, that European education has estranged the highly literate class from the illiterate and lower middle class in India. That small group of highly anglicized schools which exists in India and to which the richer people, including the civil servants, are sending their children, are admirable schools—I do not deny that for a moment—they are probably the best schools in India, but they are not the schools to breed up men and women who are going to throw themselves into the struggle to make India not only a great nation but one of the great forces for peace in the world.

To sum up very briefly we have in India all the educational problems of an under-developed country which has not yet acquired a compelling and universal sense of united purpose. There is superimposed upon that—and this is the gravest additional burden—the dead weight of an alien tradition which is unfortunately too widely and gladly accepted for the sake of the personal advantage which it brings to those who receive it. In my opinion there must come a marriage of humanity and imagination, and, thank God, there are leaders in India who have those two qualities, but they need to be much more widespread to overcome these terrifying problems which India has to face.

DISCUSSION

Sir STANLEY REED said that with the utmost humility he brought forward the question of primary education. In his experience of India, which dated a considerable time back, primary education was quite well developed. It was true that they did not need expensive buildings and equipment for this purpose. Quite simple accommodation in the villages would suffice. He wondered how many schools had been opened and how many villages had facilities for primary education now as compared with the years before independence.

Miss EVELYN GEDGE said that she had been greatly impressed during her life in India when she saw the work of the village schools. They

were then—about 1922—turning out a fine band of young teachers who every night in the week would go into the villages and teach the adult people to read and write. She could not speak for India to-day—she had not been there since 1944—but she was in touch with sources of information and she knew that the same spirit was manifest. She was also aware of the great desire of the people in general to learn English.

Sir WALTER GURNER asked whether the United Nations, through UNESCO, could do anything practical towards education in India. In 1951 when the refugee problem was extremely acute UNESCO held at Delhi a conference with the object of encouraging cultural relations between East and West. It had seemed to him rather remote from the real need of the situation but he wondered whether anything was being done along those lines.

Professor CATLIN asked whether radio and television were being applied in Indian education.

Lady CHATTERJEE said that she was connected with education in India a great many years ago and she still believed what she believed then, that it was important to have adult education. She rather regretted the insistence on primary rather than on secondary education. What one needed in India was a very strong intellectual background to the life there and one got that by means of secondary and university education. She did not agree entirely with what the speaker had said about English. Not only did the Indian people get many advantages from learning English but their knowledge of English had great repercussions throughout the world. The fact that they could express themselves in English was very important and she deprecated the idea that India should become isolationist.

Mr. H. V. HAMPTON said that the speaker had mentioned the importance of Indian languages and cultures but he had said nothing about scientific education. He would like to hear his comments on that subject.

The CHAIRMAN said that Mr. Dent had made many observations with which he fully agreed. He would mention, however, only one point. It seemed to him that the Indian children were going to be brought up roughly at the same standard as their Western brothers and sisters. He had a great admiration for the ability of the boys and girls of India. He thought the educational approach should be through their own and not through an alien culture. On the other hand, admitting that, his

experience in education left him feeling that behind it all there was a problem even more fundamental, and that was that if they were going to be given the same chances as their brothers and sisters the problem was that of the teacher. There was only one thing that mattered and that was the teacher. If they had a good teacher they had good education, but the problem was whether they approached it through an Indian traditional culture or a Western culture. How was the present Government of India to find 2½ million teachers with adequate qualifications and the right outlook? How was it going to pay them? The teachers' salary bill would always represent between 60 and 70 per cent. of educational costs. He remembered on one occasion he had the opportunity of talking to Mr. Gandhi and he asked him whether he saw any possibility of raising 2½ million teachers to provide full compulsory education for boys and girls. Mr. Gandhi shook his head and said "No." Teachers must live and the present remuneration in India was shocking. But even on the basis on which the central advisory board produced their report it was a little superior in those days to what was going on in some other countries. The cost was something like Rs. 300 million a year. This had gone up at least twice. How were they to find the money? The second problem was, if they were going to give the Indian boy and girl a teacher approximating to the teacher regarded as necessary for British children, with a minimum matriculation standard and two years training (and he did not see why the Indian boy and girl should be fobbed off with anything less) how were they going to find them? He did not think the present Government of India had really faced up to an absolutely fundamental issue.

Mr. DENT, in reply, said that the fundamental problem was, as the Chairman suggested, the money and the teachers. India had made great strides during the last seven years. In 1948 the total amount expended on education was Rs. 551 million; in 1953 it was Rs. 1,350 million. But it was estimated that to have a universal system of education would cost Rs. 4,000 million, which was only slight less than the total estimated revenue for 1954-44 (Rs. 4,398 million). It was useless for any one to pretend that these problems were going to be solved quickly.

Sir Stanley Reed knew better than he did that in primary education compulsion had been attempted in a considerable number of areas, but rarely with success. There was not the money to enforce compulsory education. He thought enthusiastic volunteers would be more in accord with the Indian spirit than attempts prematurely to enforce compulsion. Nothing could be simpler than the equipment of most Indian schools at the present time. It was a question of having teachers sufficiently well

trained and paid. He declared in all sincerity that they could not go back to the old village tradition. If a wave of enthusiasm could run through India, sweeping hundreds of thousands of these young people into a movement whereby they themselves taught their younger brothers and sisters, that would do more to achieve the desired aim than anything else. He was never more moved than when he saw a rural college in Mysore. It was not actually sending young men out to teach; it was sending them out to live in the villages and to show the people how citizens should live.

On the question of English, at the university level he agreed, but he was thinking of the equivalent of the secondary modern school in England. He begged them not to impose any more languages on the child than were necessary. Of course, the university trained Indian must have English. All scientific work was in English or German. He was absolutely in agreement with the use of English by those students who were capable of carrying through university studies.

A question had been asked about UNESCO. UNESCO was working along two lines. First of all it had held two or three seminars. It was also sending one or two teams which were doing social educational work in the villages. He might couple with this question that asked about radio and television. These media had been adopted in a number of States. An important experiment of the kind was being carried out in Delhi and some good work in Mysore came under his personal notice. Mobile film vans were also doing a splendid job of work.

He would not attempt to elaborate the idea which he had thrown out about Indian culture and peace. It was beyond his philosophical capacity in any case, and it would take far too long. He could only repeat his faith—his instinctive conviction—that the two were intimately related.

He had not mentioned scientific and technological education. Here there had probably been a greater advance numerically than in any other field. He believed that the number of institutions above the most elementary level had been almost doubled and there were several higher research institutes in being. He believed half a dozen of them had been set up at which research was conducted at a very high level.

In reply to a question as to the millions of people in South India who spoke Tamil, and a number of other tongues, Mr. Dent said that it was a matter for decision by the Indians themselves as to whether they were going to have only one national language or to recognize that there were millions of people in the South of India who did not speak Hindi.

Mr. A. E. FOOT proposed a vote of thanks to the speaker and to the Chairman, and this was enthusiastically carried.

Public Health in Ceylon

By Lt.-General Sir BENNETT HANCE,
KCMG, KCIE, OBE, IMS(R)

I SPENT twelve days in March, 1954, in Ceylon, my last visit having been in 1940. The centre of Colombo struck me as quite unaltered but the rate of building on the outskirts is fantastic—especially southward down the Galle Road past Mount Lavinia.

This expansion is providing the municipal authorities with a problem with which they do not and will not find it easy to deal; for construction has outstripped both water supply and sanitary provision. A source of good extra water is available and has been selected; but the existing mains cannot carry the load, and will either have to be enlarged or other mains laid to take the extra water. Either solution is a major and costly engineering problem.

Similarly south Colombo is now mainly unsewered; and all the disadvantages of the dry system are in evidence. Not the least of these is the collection of polluted water in blocked drains, pools and so forth, in which the culex mosquito breeds freely. Nor has this insect only nuisance value: it is one of the carriers of filariasis; and the increasing incidence of this disease is causing the health authorities considerable anxiety. Even the European and well to do Ceylonese, hitherto spared, are no longer immune from infection.

Another health problem which is causing anxiety is the increase in prevalence of amœbic dysentery. A warm moist soil favours survival of the organism; and the absence of a water carriage sanitary system in parts of the city favours its spread.

The authorities are fully alive to the situation and are sparing no effort to meet it; but the cure lies, as I have said, in major and costly engineering projects; and Ceylon is not a wealthy nation. It follows that rectification must be by stages; and also that the Ceylonese tax-payer and rate-payer will probably have to dip fairly deeply into his pocket.

Having referred first of all to difficulties and to what seemed like deterioration of hygiene compared to 1940, it is the more pleasant to be able to draw attention to the very striking progress made in other health fields, notably in the control of malaria, the control of rural filariasis, and in the attack on tuberculosis.

Malaria is controlled in Ceylon, and the occurrence of a case is a rarity, and such as do occur are either imported or come from the south eastern

dry zone where conditions are difficult. This remarkable result has been achieved by the systematic spraying of dwellings with D.D.T., thereby destroying the vector mosquito. Suitable treatment has eliminated the human reservoir, so that the odd mosquito survivor is not infected when she bites; and a stage has now been reached when perennial spraying has been successfully replaced by spraying in the breeding season only with great consequent economy. It is obvious that this happy state of affairs depends upon, firstly, the availability of D.D.T. in the required quantity, and, secondly, on the mosquito not developing resistance to it. In other parts of the world there are signs that other varieties of anopheles are developing resistance; but so far none has been noticed in the single vector species with which Ceylon is concerned.

Regarding the availability of D.D.T., for the manufacture of which the support of a heavy chemical industry is necessary, and which is consequently largely imported, I am less easy in my mind. If I can visualize conditions in which the importation of the drug itself—or its raw materials—were hazardous and uncertain, it does not in the least detract from my whole-hearted admiration for a major achievement in preventive medicine. When one remembers that less than twenty years ago Ceylon experienced a devastating epidemic of malaria the present effective control is indeed a triumph.

Rural Filariasis. The control of this disease is also well in sight, thanks to a brilliant piece of applied research by Professor Wu, a talented Chinese assigned to the project by the World Health Organization. The rural vector mosquito is of a different species from that which carries the urban disease and depends for its breeding on aquatic plants such as pistia and water hyacinth which, apart from sheltering this pest, are so prolific as to block water channels and thus create swamps out of otherwise arable land. These plants have hollow stems; and the mosquito larva has adapted itself by developing a sharp point to the syphon tube through which it breathes. Thus armed, instead of swimming to the surface for its oxygen, as do its less fortunate cousins, when a thin film of oil will defeat and kill them our mosquito larva swims to a stalk, pierces it with his sharp point and takes a good deep breath from the air in the hollow stem.

Obviously control of the mosquito is dependent on control of the pistia plant; and gangs of labour have slaved at its removal, only to find that pistia reproduced faster than they could remove. The cost of labour, also, was a serious factor. Professor Wu has discovered that by the judicious application of a selective weed killer, such as you and I use for plantains and dandelions on our lawns, the pistia will kill itself—and this at a cost less than 1/6th of that entailed in ineffectual manual removal.

As a result, channels which have been blocked for years are now running clear and limpid, large areas of one-time swamp are now under rice, and the vector mosquito larva finds that his spike is of no further value; water conditions no longer favourable, and survival impossible. These things always seem so simple, when the idea has occurred to someone else!

Tuberculosis. It is, perhaps, in the field of tuberculosis that the most spectacular results have been achieved. Since the control of malaria, this disease has become the most urgent of the health problems of Ceylon. As to its incidence I have even now no exact figures though I have seen many estimates. My guess is that in 1952 it was not very far below that of Burma. In that year, at the request of the Government, a British authority was asked to go out and survey the possibilities of thoracic surgery. In a 6-weeks visit he saw that the problem was not so much one of surgery as of combined operations; and he drew up a plan which was accepted *in toto* by the Ceylon Government and published as a white paper. Into the implementation of this plan stepped the British Commonwealth. Australia provided funds, building and nurses; Canada sent health personnel; New Zealand sent nurses; and the United Kingdom provided teams of experts, equipment, and training for Ceylonese post-graduates. The whole provided as complete and attractive a picture of Commonwealth collaboration as could be desired. Recently WHO have taken a hand in this beneficent game and sent out an expert of international repute who is collaborating gladly and happily with the earlier workers in the vineyard.

The results have just recently been assessed. The surgical expert, supported by a professor of tuberculous diseases in a great Scottish university, has just returned from the island and, with the collaboration of the WHO adviser, they have reported to the Government. The report is published in a second white paper. One of the facts recorded, which, if it were not authoritative would be difficult of credence, is that in the two intervening years the *known* tuberculosis mortality has been halved. I emphasize the word *known*; for in a country where the registration of causes of death is still largely empirical it is probable that many deaths ascribed to other causes are, in fact, due to tuberculosis. Nevertheless the known facts are little short of staggering.

Three years ago little was open to a tuberculous patient but a lingering death either in an overcrowded, understaffed hospital or in his own home. Fear of poverty led to delay in seeking advice; fear of isolation led to concealment and the spread of infection; and only in the last resort did the sufferer apply for relief, with the prospect ahead of him which I have outlined. Now, inspired not by propaganda but by visible results, Ceylon is actively and vocally tuberculosis minded. It has seen cases

despaired of restored to comparative health and efficiency by surgery. It has seen the clinic in action, identifying the early curable case and, equally if not more important, its contacts. It has seen the WHO BCG campaign in action, and it is asking for more and more. The old fear and despair has been replaced by hope and an eager demand.

To this demand the Ceylon Government has responded with the utmost enthusiasm and gallantry. Plans are on foot, and in many cases well advanced, for a clinic and tuberculosis hospital in each province. Australian nurses are training Ceylonese nurses in Colombo, Welisara and Kandy; Canadian and British health visitors are training their Ceylonese counterparts in Colombo and Galle. Two thoracic surgeons and six physicians are in training in this country and more of each are coming, the objective being that as the clinics are built so the staff is ready. British technicians are training Ceylonese with the same object in view. I could expand the picture in almost endless detail; but what I have said will perhaps explain my conviction that if the present progress be maintained, in ten years tuberculosis will be as firmly under control in Ceylon as is malaria to-day. And, if that be so, Ceylon will have served as a demonstration area and "pilot plant" for South East Asia. It is an island, and therefore favourable for the purpose. But it is also, in area and population, about the size of a Bengal district or a Commissioner's Division in N. India or Pakistan. If Ceylon is demonstrably successful these countries cannot but follow suit. And I believe that Ceylon will succeed. So I end this note with a humble and very sincere tribute to the vision and enthusiasm of the experts both of the Commonwealth and the WHO, and equally sincere admiration for the vision and energy with which the Ceylon Government have gone to work.

Correspondence

THE EDITOR
ASIAN REVIEW.

SIR, I would draw attention to two points in Professor H. G. Rawlinson's review of my book "The Wonder which was India," appearing in your October issue, which I think need clarification. Firstly the series covers ancient civilizations only, and the medieval and Mughal period of Indian history are therefore excluded—this was made evident by the sub-title of the book. Secondly the culture of South East Asia, though owing much to India, is a distinct culture, which may be covered by the publishers in a later volume.

Yours, etc.,
A. L. BASHAM.

Indian Progress in Social Welfare

THE WELFARE OF WOMEN in modern society has assumed a major significance with the evolution of a new economic and social order under the Indian Government Planning Commission. From the traditional seclusion of the home, women have now emerged to play a vital role in wider fields of human endeavour. In addition to agriculture, increasing numbers of women are seeking employment in industry, mines, domestic service in the urban areas and in various other types of utility services.

The general inadequacy of accommodation and rising prices of commodities have tended to increase domestic difficulties.

These factors, viewed against the background of poverty, illiteracy and numbers, emphasize the importance and reveal the wide scope of welfare work for women, for the improvement of their health and provision of basic education, recreational facilities and other ameliorative measures.

WELFARE OF WOMEN

During the last few decades, the status of women in India has undergone a change. Women's rights to equality of work and opportunities, education, etc., have now been guaranteed by the Constitution. But in a country like India, with an ancient culture and institutions, traditions die hard. For example, social customs like *purdah* have retarded the advancement of women. It is therefore necessary to remove such outworn customs, besides expanding and creating new facilities for the welfare and uplift of women.

Maternity and child welfare programmes thus form an important item in the health programmes envisaged by the Plan. Inadequate maternity facilities, coupled with poverty and ignorance, take a heavy toll among women of child-bearing age. It is estimated that about two lakhs of women die in childbirth in India every year, the rate of maternal mortality being 20 for every 1,000 live births.

In the urban areas maternity hospitals are inadequate. In the rural parts the position is much worse, for most village women depend on local *dais* for their confinement and after-care needs.

The paucity of nurses and trained midwives has been an acute problem of public health in India. An increase of 3,000 nurses and 1,932 midwives is envisaged in the Plan.

In the general field of maternity and child health, voluntary women's organizations like the All-India Women's Conference have been doing

useful work by establishing maternity and child health centres, medical centres, ante-natal and post-natal clinics and dispensaries.

The Kasturba Gandhi National Memorial Trust is dedicated to the welfare of women and children in the rural areas. It runs maternity and children's homes, provides nursery education, conducts courses for *gram sevikas* and *arogya sevikas*, provides medical aid to women and children besides welfare and recreational facilities.

The Women's Welfare departments in Madras and Uttar Pradesh give advice on maternity, child care and general family problems, while ante-natal and post-natal care and home remedies for simple ailments are provided in all the branches. The incidence of T.B. and leprosy are brought to the notice of the Health Departments, and patients in need of treatment are secured admission to hospitals.

The welfare of women in industry and mines has also received attention. Conditions of work for women in factories have been improved by legislation, and the provision of crèches for the care of infants of working mothers has been made compulsory in all factories employing more than 250 women.

Welfare centres for women workers exist in several coal-mining areas where women receive training in knitting, sewing, spinning, domestic economy and nutrition.

The Central Government, with the assistance of UNICEF, has established a maternal and child health training centre in the All-India Institute of Public Health and Hygiene at Calcutta. The Central Government has made a provision of Rs. 50 lakh for the next two years to strengthen maternal and child health services in the various States.

The Social Welfare Board is helping women's institutions sponsored by the important women's organizations, many of which are faced with the problem of increasing numbers of destitute and rescued women, deserted wives and widows, foundlings and orphans, etc. In all these cases the Board stresses vocational training. The training of women workers, social education for women and inspection and supervision of welfare institutions are also emphasized by the Board.

The hard core of all health problems is the low vitality of the people due essentially to insufficient and improper nutrition. Milk, although by far the most important dietetic requirement of expectant and nursing mothers and of children, is beyond the means of the majority of the people.

The Plan envisages the expansion of this scheme and the creation of nutritional sections in the States' Public Health Departments. UNICEF has encouraged feeding programmes and has provided drugs as part of

their standard equipment for child health centres. Powdered milk is supplied to children, especially in the scarcity areas.

The All-India Women's Food Council has undertaken a novel type of work with considerable success. Through its various branches, the Council runs cafeterias to popularize nutritious non-cereal foods. Women's education also receives considerable attention in the Plan. The need for special curricula and short-term courses for women in general education and in various crafts, and facilities for private candidature in university examinations have been emphasized in the Plan.

CHILD WELFARE

Children are the nation's hope of the future. The care of the child, its growth and development has always rested everywhere with the family in which it is born. Hitherto, society has regarded the child as the concern of the parents or near relations.

But in modern times the concept of child care has undergone a change. It is now increasingly realized that the child is not an isolated being, but one living in intimate and dynamic relationship with his environment. The interests of the child are in consequence closely linked with the interests and well-being of the entire community.

The problems of the child are therefore studied in relation to biological, social and psychological forces. Secondly, for the welfare of the child the emphasis has shifted from the narrow functions of protection to the wider concern for its physical, mental and moral development, opportunities for self-expression and growth of personality.

In India, where about 38 per cent of a total population of nearly 357 millions comprise children below the age of 15, the problem of their welfare assumes added significance. In a country where the family has been the most ancient, cherished and well-knit unit of society, the care and upbringing of children has been confined to the home.

However, with the decay of the old social order and with the new attitude towards children, the problem of their welfare is no longer the exclusive monopoly of the family, but has been recognized in the Plan as the cumulative responsibility of the regional community and the State.

In India, the institutional development of child welfare services owes its origin to voluntary effort and private philanthropy. Women's welfare organizations have treated child welfare as an integral part of their activities. In addition, there are voluntary organizations devoted exclusively to the welfare of children, such as the Society for the Protection of Children in India, Balkan-ji-Bari and the Indian Council for Child Welfare.

The most important aspect of child welfare is health, and the gravity of this problem can be realized from the rate of infantile mortality, which is one of the highest in the world—127 per thousand live births. The diseases that take the heaviest toll are malaria, tuberculosis and small-pox. Therefore, the major health measures envisaged in the Plan relate to the prevention and cure of these dreaded diseases.

The major cause of susceptibility to disease is malnutrition. Investigations carried out among school children have revealed a poor state of nutrition among a large percentage of them. The Child Welfare Panel of the Social Welfare Board has therefore recommended a comprehensive survey for the supply of milk and other nutritious foods to children and the establishment of child welfare centres in poor localities, with special reference to areas like the Assam tribal areas and village tracts where no such facilities exist.

Besides proper nutrition, adequate recreational facilities are essential not only for the purposes of self-expression and character-building but also for fresh air and sunlight, so vital for the physical well-being of children in their formative years.

The rapid growth of towns and cities has left open few spaces for children. Parks and playgrounds enable poor children to escape from the squalor of their environment. Several play centres are being run by voluntary organizations, while municipalities in various States have opened parks and playgrounds. This involves the proper maintenance and organization of play activities by trained workers. The Plan has stressed the need for the provision of playground services by voluntary organizations.

Indoor recreational facilities include libraries and halls for plays and film shows. The Central Ministry of Education has started exhibiting children's films. Children's literature, especially in the regional languages, is inadequate, while libraries are few. The Child Welfare Panel of the Social Welfare Board after its recent survey drew attention to the need for children's literature in both the national and regional languages, and emphasized the need for re-organizing children's recreational activities on a more modern and scientific basis. The establishment of a national children's centre, contemplated by the Indian Council for Child Welfare, is intended to serve as a model centre for child welfare activities, while the Children's Bureau is to serve as an information centre and reference library.

Nursery education is a vital part of the educational system and by it the child's character is moulded. It sets the direction of the child's educational development for the rest of his school life. It provides the child with a means of easy adjustment to the strain of life in a complex

society and secures for him friendship, affection and a chance to participate in group life.

In India, nursery schools have made considerable headway. They are being run both by the Government and private social welfare agencies. In addition to the day nurseries, a large number of crèches are being maintained and run efficiently both by voluntary agencies and by the Government in factories in the major cities.

An important problem in this connexion is that of orphans and destitute children. Owing to poverty and the high mortality rate among adults, there are large numbers of such children. Illegitimate children, too, are often abandoned, and in many cases children are the innocent victims of neglect and abuse in their own homes or in the homes of foster parents or relations. The numbers of such children are steadily on the increase. Uncared for and without guidance, they are a source of exploitation for immoral traffic, vagrancy, thieving and allied social evils.

The number of orphanages is small, and those that exist are chiefly custodial in approach. What is required instead is individual care and attention, training in community and family living and preparation to meet the problems that will confront these children when they leave such institutions.

The recommendations of the Child Welfare Panel of the Social Welfare Board include the registration and licensing of institutions for the welfare of children. In its opinion, orphanages, destitute homes, etc., should conform to certain standards of nutrition, care and education and be subject to supervision, inspection and control. It has stressed among other things the need for the establishment of well-organized foundling homes for the care of children deserted by their parents.

The Board has also recommended that maternity and child welfare centres should be developed. These should include family planning clinics, infant welfare services, day nurseries and play centres. Crèches and nursery schools should be started on an extensive scale, mid-day meals should be provided in all schools and training programmes for child welfare workers should be organized.

YOUTH WELFARE

Youth is the stage of life in which latent abilities can be channelled into fields of constructive activity. The ultimate aim of youth welfare is training in citizenship and the formation of a right attitude to life. This assumes the creation of opportunities for self-expression, training in leadership, participation in social and cultural activities and the understanding of public problems at home and abroad.

The most effective method of enlisting the co-operation of youth is by initiating programmes through their own organizations. One of the most important and successful youth organizations in the country is the Scouts and Guides Organization. In 1952-53 there were 408,777 Scouts and 64,154 Guides in the country. The Youth Hostel movement has made a beginning in the country. Some buildings have been chosen for conversion into youth hostels during vacations. The Youth Counselling Service is also in its infancy. The setting up of the Vocational Guidance Bureau at Bombay represents an important step in this direction. Institutes of this kind, which deal with the personal and general problems of youth, have a tremendous role to play in shaping the character and thought of youth on the right lines. The development of the Youth Counselling Service has accordingly been recommended in the Plan.

There is a growing feeling in India that youth should participate in constructive activity in order to acquire a proper perspective of the country's problems and to realize therefore the dignity of labour. The Plan has recommended that the Government of India should sponsor the establishment of a national council of affiliated youth organizations with a view to forming a non-political and constructive youth movement. The National Cadet Corps, which functions at the Universities, aims at the growth of physical fitness, discipline, character and the general training of youth for defence. The members of the National Cadet Corps undertake labour work also.

A sum of Rs. 1 crore has been earmarked in the Plan for a comprehensive programme of youth camps and labour service by students. The aim is that students between the ages of 18 and 22 should devote about a year to national service and thus learn to value the importance and dignity of manual labour. The State Governments are given a choice as to the nature of the work to be undertaken.

The Planning Commission has also decided that labour service by students in community or other development projects will be reckoned as "local development works" and as such financial assistance will be given to meet their boarding and other expenses.* But certain stipulations have been laid down for the grant of financial assistance, such as a minimum period of training of not less than three to four weeks. A ceiling of Rs. 10,000 has been placed as the maximum amount to be given. So far, several student camps have been held, their average duration being about a fortnight. In addition to labour service by youth, a national physical fitness standard for different age and sex groups has been recommended in the Plan. It has also been recommended that the College of Physical Education at Kandivali in Bombay should be upgraded into a national institute for training and research in physical education.



THE HON. M. A. H. ISPAHANI

MINISTER FOR INDUSTRIES, GOVERNMENT OF PAKISTAN

Before joining the Pakistan Cabinet last October, Mr. Ispahani was High Commissioner for Pakistan in the United Kingdom from 1952.

Scientific Progress in Pakistan

WHEN PAKISTAN achieved Independence in 1947 it inherited little in the way of scientific assets. It had no scientific associations which provide the mainspring for scientific development.

However, in December 1947, the Pakistan Association for the Advancement of Science was established and for the next few years was the only scientific Society in the country. It was, therefore, called upon to undertake a variety of functions which in other countries are the responsibility of specific societies.

In more recent years other societies have come into being and have taken up work in their own specific fields. The more important of these are: The Pakistan Geographical Association, established in 1948; The Pakistan Chemical Society, in 1949; The Pakistan Association of Scientific Workers, in 1950; The Physical and Mathematical Society, in 1952 and, in 1953, the Pakistan Academy of Sciences was inaugurated by the Prime Minister in Lahore.

As the parent Association, the Pakistan Association for the Advancement of Science has sponsored these societies, provided them with funds and tended their growth. An important feature of the Association's work during the last six years has been the promotion of scientific research through the award of Fellowships. Funds for these have been made available by Government, Imperial Chemical Industries, and H.R.H. the Aga Khan.

Perhaps the most important activity of the Association has been the organization of an Annual Science Conference. Six of these Conferences have been held since 1949, in different university centres of the country, and each has been attended by 500-1,000 delegates from as many as 20 different countries.

The establishment of the Pakistan Academy of Sciences in 1953 supplied a long-felt want in that it provided the country with a body of top-ranking scientists whose advice could be available on all scientific matters. It started with nine Pakistani scientists as its Foundation Fellows. Since then another five have been elected and it is expected that five will be elected every year until the limit of 100 is attained.

About a year ago, in Karachi, the Governor-General of Pakistan inaugurated the Council of Scientific and Industrial Research. This followed the establishment of a Directorate of Scientific and Industrial Research, under the Ministry of Industries 18 months earlier.

During the past year various committees of the Council have been occupied in drawing up the plans of four laboratories—a Central Laboratory in Karachi, two Regional Laboratories in Dacca and Lahore and a Research Laboratory in Peshawar, which are expected to cost around two million pounds. Nuclei of the Central and Regional Laboratories have already started functioning and the other two centres are expected to start operations shortly. The Council's laboratories have already done much useful work in various scientific fields. They have developed a commercially feasible process which improves the quality of Pakistan's coal by separating its high sulphur content and leaving a residue of good quality coal suitable for boiler firing and even yielding metallurgical coke necessary for the iron and steel industries. This investigation has also opened up the possibility of establishing numerous other industries based on the utilization of the by-products obtained in this process.

With the growing importance of science and the utilization of scientific discoveries in ordinary every-day life, universities are being called upon to play an increasingly important part in the training of the scientist. The older Pakistani universities have indeed made important contributions to fundamental knowledge in all scientific fields.

The science laboratories of the Universities of the Punjab and Dacca are active centres of research and especially noteworthy work has been done in the field of chemical research. Last year Punjab University Institute of Chemistry published a volume of their collective papers of research which embodied 33 papers and 37 M.Sc. and Ph.D. theses. The subjects ranged from investigation of indigenous minerals and soils, studies on foods and nutrition, the isolation of drugs from medicinal plants to the utilization and new uses of such materials as cotton seed and gypsum. Carotinoid pigment is another field which has received extensive attention.

At Dacca University noteworthy studies have been made in the fields of nutrition, enzymes, oils and fats and on soil problems.

Mention must also be made of the important studies of Qazilbash in the field of medicinal plants at the botanical laboratories of Peshawar University. Of particular value is his work on Kurram Santonica, the source of Santonin, used for nearly 150 years as a remedy for round-worm infestation. Santonin is obtained from *Artemesia* which grows in abundance in the Kurram Valley and in Kashmir. Kurram Santonica or "*Artemesia Kurramensis* Qazilbash," has a Santonin content almost three times richer than that of Santonica found in other parts. During the last few years nearly 250 tons of Kurram Santonica have been made available annually to world markets.

A Recent Visit to Burma

By Lt.-General Sir BENNETT HANCE,
KCMG, KCIE, OBE, IMS(R)

I ARRIVED IN MINGALADON, three hours late, at 1 a.m. on the morning of the 14th February, 1954, to find the long-suffering Third Secretary of the Embassy cheerful and most efficient despite the hour and the long wait.

As our car left, after the usual clearance routine had been completed, I noticed that a long black limousine slid out behind us and hung on to our tail all the way into Rangoon. I asked my companion what he thought it was, and after a look he replied that it was a police car. My immediate reaction was "Why; what have I done?" to which he replied, comfortably, "Nothing; but they take no risks with foreign officials on a mission."

Those two remarks provide the key to one aspect of life in present day Burma. U. Nu's Government rightly consider that the restoration and preservation of internal order is their primary concern. Various Sections of the inhabitants of Burma—Chins, Cachins, Kerens and so forth, each with their sectarian interests and united in nothing but their opposition to the powers that be, maintain a sort of guerilla campaign which may even affect the environs of Rangoon. When, later, I visited Mandalay, the Burmese Government refused to allow me to do so by road and insisted on my flying; and even a 32-mile journey to Hlegu and Pegu was done under police escort to the municipal boundary and strong military escort thenceforward. Nothing, in fact, happened; but the whole atmosphere was strongly reminiscent of the North-West Frontier of India in its less tranquil moods. My very lively sympathy went out to the Burmese Government in their gallant effort to get on with nation building activities and the restoration of their body politic while bedevilled by the activities of these dissident sections who are as resourceful as they are persistent.

I had never before visited Burma, and so am unable to give those of my readers whose service was spent there any comparison with pre-war days. I saw, however, enough of Rangoon to realize what a spacious and gracious place it must have been. Even now, despite the evidence of heavy bombing which still persists, there is an air of space and dignity about the place which must impress even the most casual observer. And above all, the colourful, smiling, cheerful population in their spotless

clothing, all apparently happy, have left an attractive and indelible impression.

In one respect, however, deterioration was obvious. When independence was granted, British officials, and large numbers of Indians, left the country. Among these latter was the harmless necessary sweeper-class—mostly South-Indian *Harijans*. Now the Burmese will do most things, and do them with an air; but one thing he will not do is scavenge. The result is evident in any Rangoon street. Add to this the colonies of refugees from the insurgents of the *mofussil*, and it will be obvious that the authorities are faced with a public health problem of considerable dimensions. Both the Municipality and the Government are fully alive to the situation, and are straining every nerve to cope with it. I have no doubt they will solve the problem with time; but the solution is not evident as yet—at least to the casual observer.

My mission was primarily concerned with health conditions—to see what we could do, under the Colombo Plan, to help the projects of the Government, to see the work of other international agencies in the same field, and to supplement these and avoid crossed lines and duplication of effort.

I gained the impression that after the restoration and maintenance of law and order the Government gave next priority to health activities, and would like to take this opportunity of expressing my admiration of the energy and ingenuity with which they are addressing themselves to the task.

In many Eastern countries, as members of my late Service know only too well, the medical and health departments are apt to be the divorced wife of the administration. The dividends accruing from their efforts are invisible, and cannot compare in vote-attracting capacity with education or the endowment of religious charities. Yet it seems to me that there is little point in cramming the heads of under-nourished anæmic children with indigestible knowledge when their life is conditioned not by their parents or the state but by the malaria parasite and the hook-worm. And I am quite convinced that health is fundamental and that it pays more to safeguard their bodies in the first place and to worry about their souls later.

It was therefore a most refreshing experience to meet in Burma a Government fully alive to the fundamental claims of health, and fully determined to secure and promote it by every means in their power.

In order to give a slight idea of the task involved, a very short résumé of conditions at the moment is not out of place. During the war at least 40 per cent of the existing hospitals and dispensaries were destroyed, and at least 50 per cent of the remainder were so damaged as to be quite unfit

to function as such by any sort of standards. The fine Harcourt Butler Public Health Institute was gutted by the Japanese, with the result that vaccine lymph manufacture and that of cholera, typhoid and anti-rabic vaccine, water and food analysis and malaria control, went by the board. Cholera and malaria are endemic, dysentery, leprosy and venereal diseases are serious problems, and the incidence of tuberculosis is the highest of which I am aware, with the exception of that among the Bantu races in South Africa, who are specially susceptible.

The doctor-population ratio in this country is somewhere in the neighbourhood of one doctor to 1,100 people: in Burma there are about 700 doctors for a population of 18 millions, giving a ratio of just under one doctor to 17,000 people. Medicine as a career, until recently, made little appeal to the Burmese; and most of the doctors under the old regime were British, Anglo-Burman and Indian, and most of these left the country with the granting of independence.

This, then, is the task facing the Government of Burma. Small wonder that they are anxious for assistance in the task. And assistance is being generously given by WHO, UNICEF (and, until recently, by TCA) in specific directions such as tuberculosis, malaria and venereal disease, and in the training of all sorts of health workers. The Burmese Government have restored the Rangoon General and the Dufferin hospitals as teaching units, have re-equipped the medical college to a very large extent, and have provided the money for a second medical college in Rangoon to which will be attached a thousand-bedded hospital—the whole to be known as the Medical Centre.

In addition they have a scheme, of the success of which I am much less sanguine, for yet another medical college at Mandalay. I will not here go into details, but content myself with saying that neither what I saw of the Mandalay Hospital nor what I heard of the type of building of which the new college was to be constructed was such as to carry either conviction or confidence. I think that here enthusiasm had outstripped both realities and practical essentials.

Not that Mandalay is not a suitable location for a teaching institution: on the contrary, it has a great deal to recommend it; but both the structure and the staffing of the hospital will need drastic improvement—especially on the side of nursing and technicians—before students can be taught modern medicine there. Also the College with all the ancillary services of water, gas, electricity, suction, etc., must be much more solidly built than the plans of which I heard allow.

Of Mandalay as it was pre-war, only the shell remains. Of Thebaw's luxurious palace nothing but the enclosure has survived. The Japanese elected to make a stand there against our advance and, as a result, the

place was flattened. But the milè square enclosing wall persists and one can guess at the magnificence that it once enclosed.

Finally, I left Burma with old service friendships renewed and strengthened, with a warm regard for a charming, colourful and brave people, and an equally warm admiration for the efforts in the health field of the Government. These efforts are deserving of anything the friends of Burma can do to help.

Impressions of a Recent Visit to Turkey*

By LORD KINROSS

I FEEL THAT there is an established tradition of English travel in Turkey, going back through the centuries, and that this has played a notable part in building up a permanent friendship between our two countries. In the nineteenth century, in particular, there were many great English travellers in Turkey—scholars and antiquarians and geographers and so forth—and these men, in the books they wrote, gave a picture of the country and its people which made it familiar to the ordinary Englishman. In fact the curious thing is that Turkey was, in a sense, more familiar to the ordinary Englishman in the nineteenth century than it is to-day.

The reason for this is obvious. From 1914 onwards Turkey did become more or less a closed country, as far as the foreign traveller was concerned: firstly owing to the first world war; subsequently owing to Atatürk's period of internal reconstruction, when visitors were not encouraged, and thirdly owing to the second world war. It is only to-day, after nearly a generation, that you have a régime in Turkey which is making things easy once more for the traveller as in the past. Thus the time has come when the tradition of English travel in Turkey can and should be revived, so that English people can come to know as much about Republican Turkey as they did about Imperial Turkey. It is already being revived, and with very beneficial results to our two countries. One of the first travellers to re-establish the tradition was Lady Kelly, who has recently described her travels in Turkey in her charming and informative book on the country, "Turkish Delights." I can only

*Based on an address to the Anglo-Turkish Society.

presume to follow very humbly in the footsteps of such a notable pioneer. I do so in the hope that my own rather superficial and random observations on the country may induce other travellers to follow in Lady Kelly's footsteps, and so help to revive this tradition which can be so valuable to Anglo-Turkish understanding.

First of all I feel that I must make one thing clear to aspiring travellers in Turkey. Turkey, as we all know, is to-day an outpost of Europe, whereas in the past she used to be, rather, an outpost of Asia. To-day Ankara, from the point of view of modern comforts and amenities and so forth, is just like any European city. So is Istanbul; and so—though perhaps to a lesser extent—is Izmir. But Turkey is still two countries. There is a European Turkey; and I hope my Turkish friends will not misunderstand me when I say that there is still also an Asiatic Turkey. Outside those three European cities you are in Asia—a rapidly changing Asia, it is true; but it is still, from the point of view of comforts and amenities, Asia. This is, of course, no criticism of the Turks. You can't change a continent overnight. They are making very great efforts to get tourism organized, and each year I go to Turkey I see more and more progress. But if you are going to travel in Turkey you must, I think, make up your mind that, once you are outside Ankara and Istanbul and Izmir, you mustn't yet expect, as a general rule, to find European standards of comfort.

Having issued this warning, I can now say something about the amenities which are to be found, in the Anatolian countryside. In the first place, the hotels. Well, they are simple places; inns, really, or caravanserais, rather than hotels. They are run on the dormitory principle: that is to say, you pay for a bed rather than a room; and if you want a room to yourself—well then you may find you have to pay for three or four beds. But this is really not such an imposition as it sounds, because a bed in Anatolia is astonishingly cheap, and if you take a room with four beds in it, the chances are that it won't cost you more than six or seven shillings. Apart from the beds, and a chair to each bed, you will find that there isn't much other furniture in the room, as Anatolian hotels don't as a rule cater for a long stay. But at least the room, in nine cases out of ten, is clean. D.D.T. has been imposed by law throughout Turkey. As regards baths—well you won't, as a rule, find a bath in an Anatolian hotel. And the reason for this, is that the Turks—who are the cleanest of people—prefer to go to the Hamman, to the Turkish bath; and I must say I prefer this too. There is nothing more soothing, after a long day's travelling, than to lie and relax in the warmth of a Turkish bath, and then be pummelled all over, and finally deluged with soft soap-suds—emerging far cleaner than I have ever known myself emerge from my own bath at home.

And it is an added pleasure when you can recline, as you can at Broussa, in a bath which has remained unchanged since the time of Justinian, by a circular pool with a colonnade of Byzantine columns around it. I must say I often wish, when I travel about England, that there was a *hammam* awaiting one after some long and grimy journey—as there almost invariably is in Turkey.

Then there is the question of food. The traveller need have no misgivings about food in Turkey. Turkey is the home of oriental cooking, just as France is the home of European cooking, and the standard of food, all over Anatolia, is high. You need never carry picnic meals with you—though it is sometimes nice to do so: I had a delicious picnic this summer at the Cilician Gates, on the way up through the Taurus, sitting by the river and drinking Turkish wine, and eating sandwiches made of *bastirma*, that highly spiced smoked meat, which tastes rather like ham, and *dolmas*—stuffed vine leaves and peppers and tomatoes, out of a tin. But even in the smallest towns, in Anatolia, you will find several restaurants. You go straight into the kitchen, and choose your dish, from about half-a-dozen of them, pilavs and stews and so forth, steaming on the hob; and if you fancy something plainer you can always get *Kebabs*, grilled for you in a few minutes; and then you neutralize all the acids with a great bowl of *yoghurt*. Turkish food is certainly one of the pleasures of Turkish travel.

When we come to what one might call the loftier pleasures of Turkish travel, I must first of all say something about the scenery. I know no country which has such impressive scenery as Turkey—and moreover such varied scenery. Geographically, of course, Asia Minor is the end of the great Asiatic tableland, surrounded by a rim of high mountains, and by coastlands which are essentially European in character. And within this framework you get a great deal of variety. The Black Sea coast, for example, is entirely different from the Mediterranean coast. It is of course a northern coast, washed by winds and rains from the Russian steppes, so that the mountains, rising steeply up from the sea, are thick with the kind of vegetation which you get in the North, say in Central Europe—great forests of beech and chestnut, and on the lower slopes hazel nuts, and cherry trees—and everywhere an undergrowth of rhododendrons and azaleas, which are a magnificent sight when they are all in flower in the Spring. One of these is the notorious *azalea pontica*, which produces what is called “mad honey.” It is a form of intoxicant, which made Xenophon’s soldiers behave in the most peculiar fashion, and you can still get it, in season, in the villages about Trebizond—though I don’t recommend it. Raki, as a stimulant, is on the whole less hard on the stomach.

You climb up and up through these forests, and then through more Alpine forests of pine, until eventually you get to the top of the range, looking over into Asia: and then the effect is really extraordinary. Because there is virtually no descent the other side: just this great Asiatic tableland, rolling away, almost level with the tops of the mountains, towards infinite horizons. I have never seen any contrast of scenery so dramatic as that sudden change from the lush mountain pastures of the North, with their towering peaks, to this great level plateau, bare and baked by the sun. There are, of course, great mountains rising from the plateau itself: the sources of the Tigris and the Euphrates and the Araxes, and other great rivers. Above all there is Mount Ararat.

I climbed up a part of the mountain—partly on foot, and partly on a cab-horse, the only horse which happened to be available. About half way up I found an encampment of Kurdish shepherds, with black tents. They invited me into a tent, and gave me *ayran*—the cool, sour milk of the mountains—and glasses of tea. Their women wore a costume just like that of our Victorian grandmothers, which must have been evolved a long time before them. They wore layers of flounced petticoats, with balloon sleeves, and bloomers, in gay, flowered cretonnes. Only the blue beads and cowrie-shells, threaded into their pigtails, stuck a slightly outlandish note. The tent was strewn with rosebud cretonne cushions, and there was an old granny, working away at her wool-work in the corner. Altogether a charming, Victorian domestic scene.

The women, in Anatolia, spend much of their time weaving carpets. I was invited into a peasant's mud-built house near Kars, where not only the floor but the walls of the whitewashed living room were covered with carpets. They had been made by his womenfolk from the wool of his sheep, with the name of each one woven into the pattern. He told me that three women could weave a carpet in a month. I asked him how many children he had. He replied "Two," and then, as an afterthought—"and three girls"—a little ungracious, I thought, to the weavers.

Up in this part of the country, I travelled for some time along the Russian frontier—and this was an impressive experience. It was impressive largely because of the spirit of the Turkish people one met there. I felt very strongly that here was a peasantry with a very genuine, sturdy spirit of independence. Here are a people, I felt, who have never, even at the worst period of the Ottoman Empire, been oppressed as the Slavs have oppressed their kinsmen opposite. Control from Constantinople was always rather remote control, the pashas who exercised it, on the spot, were sometimes good pashas, and sometimes bad pashas, but as long as the people paid their taxes and did their military service they were left more or less alone, and in possession of their own lands. There may

have been officials, but there were few big landowners to oppress them, because the Sultans had always discouraged the growth of a large landed aristocracy, as a potential rival to their own power. By the standards of the time—and by comparison with the Russian peasantry—they were a reasonably independent, peasant population.

This spirit of independence, which has never been altogether crushed, is now released, and it is very interesting to notice it, as one travels about the country. There is plenty of free speech in the coffee-shops. There is what one Turkish M.P. described to me as a Hyde Park atmosphere—an atmosphere in which any one can say what he likes. I used to sit in them in the evenings, watching these hard-headed peasants as they listened to the radio from Ankara, or to the news from the local newspaper, read out to them probably by some literate member of the younger generation. And I couldn't help thinking that the Russians in their coffee-shops, just across the frontier, must have been listening to a very different story.

There are usually two coffee-shops in a Turkish village: a Democrat one on one side of the street and a People's Party one on the other, and you get a different party newspaper being read out in each coffee-shop. These are people who want to know what's going on, and, despite their lack of letters, are determined not to be put upon. They have considerable experience of war, usually with Russia, going back over several generations and considerable political shrewdness. Sitting in a coffee-shop one day, in a small village on the Black Sea coast, I became the centre of a circle of villagers who asked me the most searching questions about international affairs. They wanted to know all about the Atlantic Pact, to which Turkey was on the point of being admitted. They asked about America's policy in China—why she didn't help Chiang Kai-Shek, and so forth. They wanted to know whether there really was such a thing as the atom bomb. They spoke with pride of the Turkish Army, and wanted to know whether it wasn't better than all the European armies, except the British. A lot of these peasants had worked in Russia, before the Communist regime obliged them to clear out. So they knew all about it. And that is one of the reasons why Turkey is almost the only country in the world where Communism virtually doesn't exist.

Not far away, up on the plateau, I travelled right along the Russian frontier, by the Araxes River, and it was impressive to see the dogged, impervious way in which these peasants cultivated their land right up to the frontier line. This caused occasional incidents, as when a Turkish cow or goat violated Soviet sovereignty, and was either shot or punctiliously returned, with a protest. These people had been driven from their lands by the Russians once in every generation, for a century or

more, and were quite resigned to the fact that they would probably be driven from them again. But they were not in the least intimidated by the prospect. They would return to their lands, as they had always returned before. On the Russian side of the frontier, on the other hand, there was not a sign of life, except for a few military look-out posts. The Russians had moved all their villages five miles back from the frontier, and were urging the Turks to do the same, to avoid trouble. But the Turks refused, explaining: "We're a democracy! Our people's land is their own." The impression I got about the Russian frontier was that it was designed as much to prevent Russians from getting out as to prevent Turks from getting in. In fact, recently only two had got out. One was a Russian staff-officer, armed with plans; the other was a peasant girl of sixteen, armed with a heavy sack. The sack was filled with loaves of hard, black bread. This girl must have been surprised by the world in which she found herself—a world of relative plenty, and of freedom. As the officer who was with me remarked: "Do you know, when I look at Russia, barricaded behind that frontier, I begin to believe that she must really be afraid of us. I don't mean only afraid of our soldiers; I mean afraid of our democracy."

This brings us to the topic of the Turkish soldier, who is guarding the frontier so doggedly. Roughly a third of the Turkish Army is based in these eastern regions. It is becoming, year by year, more of a modern force. Its human material is admirable. The Turk is a born fighter: he likes fighting for fighting's sake. The life of the common soldier is hard. His pay amounts only to a few shillings a month. His family supplement this as a matter of course, and support his wife, if he has one, regarding his service rather as a form of dedication to the state. But he has little to spend his money on. He does not as a rule drink alcohol; his cigarettes cost him 1½d. for twenty; he can travel, at least on the roads, for next to nothing. He is fed and clothed and housed, in barracks which are usually clean, sleeping dormitory-wise on a carpet, as he probably does at home. He is well fed, being entitled to ten ounces of meat a day, with ample fats and vegetables, rice and cheese. He may be better fed than the Russian soldier across the frontier. Finally, the Turkish soldier's prospects of promotion have improved. He can now rise from the ranks to become a corporal or sergeant; the Turkish sergeant-major can rise to be an officer; and among the senior officers are many younger men than before. The rigid outlook of the Old Brigade is modifying.

On the walls of every Turkish barracks are printed slogans: "A man is proud to call himself a Turk"; "The Turk in war is the bravest of all people." There are no false heroics about these slogans. They reflect the unquestioning patriotism of every Turk, and his unshakable belief in

his own fighting capacity. The Turk still has the heroic conception of war. The soldier who was posted to Korea, at that time, considered that he had struck lucky; he was genuinely envied by his companions; and when he got back he was crowned with laurels and fêted as a national hero. A battle, to the Turk, still means a hand-to-hand fight, and his instinctive gesture is still a downward thrust, as though delivered from horseback with a spear. But he is becoming mechanically minded, as I certainly found as I travelled throughout the country in buses and lorries, and his army to-day claims to have a force of 30,000 trained technicians.

South of Mount Ararat one gets eventually to Lake Van—this great inland sea, lying surrounded by mountains, as it were on the roof of the world. This is a landscape which reminds one of the first book of Genesis; it is so empty, and still, with nature reduced to its barest components of Earth and Rock and Water and Light—rather like a world which has just been created, but in fact a world of great antiquity, as one can see from the inscriptions, going back thousands of years, on the great rock-fortress of Van.

Beyond Lake Van the landscape changes again as one goes down once more from the plateau, into the hot, dry Mesopotomian plains beneath. Here there is the great black walled city of Diyarbakir, and the white walled city of Mardin, which looks right over towards the great deserts of Syria and Iraq. This is a very different landscape, though it is still Turkey, and finally one gets to the Mediterranean coast, which is utterly different again. This year I spent a week or two travelling along this coast in a small boat, and I can assure you that, as Rivas goes, it beats any other stretch of the Mediterranean coast. It is on an infinitely grander scale than the French or the Italian Riviera, with the snow-capped ranges of the Taurus tumbling straight down to the sea; and a pine-scented coastline of white and gold cliffs, and long white beaches, and deep clear pools to bathe in; and all of it flooded with that brilliant light which distinguishes the Eastern from the Western Mediterranean.

I shall never forget my first day westwards along the coast from Antalya. We came to a place where the coast formed a peninsula, and here was a city, apparently of some size, with two harbours, and an artificial breakwater, and a well-built stone jetty, on which we landed. But there was not a soul in sight. And the reason was that it was a Roman jetty, and a Roman city—the city of Phaselis—which had been uninhabited and more or less unfrequented for perhaps fifteen hundred years. Everywhere, along the coast, these cities still survive—in ruins, of course, but still substantial relics of the days when it was a Roman and before that a Greek Riviera: a Riviera devoted not merely to commerce and piracy

and naval warfare, but to the arts of drama and sculpture and literature and science too.

Along the Cilician coast, west of Mersin, you drive for miles through what is in fact a Roman built-up area, now virtually uninhabited. Up in a valley further west, the Turks have restored an old Roman aqueduct, thus irrigating thousands of acres of land at a fraction of the cost which modern engineering would demand. East of Antalya, at Aspendos, you see a great skyscraper of a building, standing up from the plain. It looks not unlike a modern factory, but is in fact a Roman theatre, with seats for 7,500 people, almost intact; and the Turks have recently started to use it for performances of Shakespeare, in Turkish, and for displays of wrestling, their favourite national sport. At Demre, and at Patara, further west, you see two great granaries, built by the Emperor Hadrian for his Navy, and looking like rather solid, English Georgian customs houses. It is evident that these were once thriving shores of Greece and Rome. And the same, of course, applies to the Aegean coast, where we reached the sites of earlier, Greek cities: Cnidus and Halicarnassus, in what was once Caria; Miletus and Ephesus, in Ionia. All along these coasts there are Classical sites surpassing many of those in Greece itself, and they are becoming yearly more accessible, from the land as well as from the sea.

Travelling about Anatolia is still an arduous process and not a very comfortable process, but at least it *is* now possible to get about, on four wheels, in most parts of the country. Thanks to American aid and equipment, and Turkish enterprise, a network of roads is materializing. There are of course bad roads—but there is an increasing number of good roads. If anything, I think, the Turks have been in too much of a hurry about their road-building. The Americans wanted them to take longer over the process: to make fewer roads but better ones. But they preferred to make as many roads as possible, as quickly as possible, and to re-make them in a few years' time if necessary. And they may well have been right.

For these roads make an enormous difference, not merely to the traveller but to the life of the average peasant. The backwardness of Anatolia, which prevailed until a few years ago—and of course still prevails to a decreasing extent—was due very largely to the extraordinary isolation of its villages. A terrifying picture of this isolation, and consequent primitiveness, has been drawn by a talented young Turkish schoolmaster, Mahmut Makal, in a Dickensian book called “Our Village”—called in English “A Village in Anatolia.” This book—in effect an exposure of existing social conditions—caused a great stir throughout Turkey, and was effectively used by the Democrats as a tick to beat the government

with at the elections of 1950. Since then a very great deal has been done to improve the conditions of the villages of Turkey, in the way of better housing, and dispensaries and schools and so forth, but mainly in the way of communications. Thanks to this programme of road-building, the villagers now have a contact with their neighbours and with other parts of Turkey which was formerly denied to them and are thus released from the isolation of centuries—an isolation which was as much mental as physical.

It is extraordinary what a difference these roads make to the life of the average peasant. I drove up on one of the most precipitous, in a fruit lorry, from the Black Sea coast up through the Pontic "Taurus," to the plateau at Kars. Before the road was built the peasants on the coast had little market for their fruit, which simply rotted on the trees; and the peasants on the plateau led a fruitless existence. Now the peasants on the coast had money to spend, and the peasants on the plateau had fruit. It was extraordinary to see the enthusiasm with which they swarmed on board the lorry, on our arrival at Kars, unloading the fruit and having it on sale in the market in a matter of minutes.

On the road to Lake Van I was given a lift in a lorry, whose driver had until lately been a mason, in a village in the Black Sea mountains. He had paid £1,000 for his lorry, and now carried cargoes of sugar in it, to all parts of the country. His petrol cost him as much as £17 the trip, but all the same he made a clear profit of £750 a year, of which he only spent half. In a year or two he proposed to hand the lorry over to his mate, and buy another. Thus are capitalists made. These are simply two instances of the way in which roads are changing the life of the countryside, a revolution which is not merely economic but social and psychological.

The main problems of Turkey to-day are, of course, social problems. Take for instance, the problem of education. It is extraordinary what an appetite there is for education to-day, throughout the length and breadth of Asia Minor. Travelling across the Armenian plateau between Ardahan and Kars, I was struck by the villages strung out along the road. The houses were the round mud huts which have prevailed for centuries. They are hardly more than burrows, huddling close to the earth, often without windows and with grass growing over their roofs. But in the centre of almost every village is a modern white building with a red roof. This was the primary school—the goal of every Turkish child. Everywhere the boys were wearing peaked school caps with a laurel badge in front—the proud badge of literacy; and the young men were wearing old school badges in their buttonholes; and the girls were all going to school, on equal terms with the boys. Money, unfortunately,

still has to be spent on guns before books, and it may be another generation before Turkey can claim to be wholly literate. But at least the effort is being made, and in the right direction. The young Turks are being educated not only to be clerks but to be good peasants—thanks, a good deal, to the government's system of village institutes for the training of teachers, of which you know already.

Economically, Turkey's progress becomes more and more marked, each time one visits the country. To-day there is a real feeling of prosperity in many of the rural areas. Money is being spent by the government, on a very big scale, and it is being spent largely on the peasant, in the form of subsidized prices for his crops, and loans, and grants of machinery, and so forth. The process has been helped by a cotton boom, in those valleys and plains which are enriched by the silt, brought down from the Taurus. Here you see the peasants at week-ends, joy-riding along the roads in tractors, with their wives and families in trailers behind. I have even heard of peasants who are doing so well that they buy refrigerators and, since they have no electric current, have them fitted with locks, to keep their banknotes in them! Turkey aims at becoming a big exporting country in foodstuffs, especially in wheat, and is concentrating all her efforts on agricultural production. The country has no deserts—or at least no natural ones. Its soil is fertile, and it has plenty of water. The problem is to get the water to the soil, and this is being energetically tackled by the building of barrages and the boring of wells.

But there is another problem—and that is population. Asia Minor is underpopulated. One hears the frequent cry, "Adam Yok," meaning "No Adams"—or "No Men." I travelled through regions which once were rich, but which are now very sparsely inhabited—owing partly, I suppose, to the drain on the Turkish population of a century of wars, and partly to the expulsion of the minorities—the Armenians and the Greeks. A year or so ago the Communists, with the intention of doing the Turks an injury, started to push large numbers of Turkish Muslims across the frontier from Bulgaria. But the Turks, owing to their shortage of population, welcomed the influx, and have profitably absorbed the Bulgarians, who are of excellent, healthy stock. There was some talk, at the time of my visit, of settling them around Lake Van, but an obstacle to this was the need for screening, so close to the Russian frontier. Now the influx has ceased. The Bulgarians have changed their policy, and are keeping the Turks at home and indoctrinating them as Communists instead.

Turkey has another shortage, besides that of population. She needs capital. When the Democrats came to power they reversed Atatürk's process of state control of industry, and a number of industries were

offered to private enterprise. But there was too little capital available in private hands, and the Turks have not in the past had the habit of investment. The banks are doing their best to stimulate it, and carry out advertising campaigns throughout the country, with colourful posters, portraying the benefits of investment. They have gay shop-windows, brilliantly lit and dressed by experts, displaying the lottery prizes which the Turk stands to win, for each sum invested: radio-sets, and washing machines and models of houses, and so forth. I even heard, from a Turkish friend, that one bank had offered, as first prize, a bag of gold. Investment is thus increasing. But Turkey still needs foreign capital, to develop her resources to the full. And the foreign capital is beginning to come in.

In Turkey to-day there is, in every field, a welcoming attitude towards the foreigner. As an ordinary traveller, I found nothing but friendliness. It took time to get permits to visit the military areas. But once they came through, no further obstacles were put in my way. Turkey, in short, is no longer in any sense a closed country. And the time has come, I think, when it should be put back on the itinerary of every enterprising English traveller. The habit of travelling in Turkey was one of our best habits, in the past. And it's a habit we should get into again.

The Tuberculosis Campaign in Turkey

THE MAIN LINES of the work of the tuberculosis campaign in Turkey are concerned with the establishment of Tuberculosis dispensaries; research; institutions for the isolation and treatment of those infected with tuberculosis; application of Tuberculin and BCG; propaganda activities; and the framing of laws and regulations for giving effect to the work against the disease.

DISPENSARIES

The dispensaries, which constitute the first step in the war against tuberculosis, are being worked as institutions for depistage and follow-up with the opening in various provinces of fresh ones every year. Their number to-day has reached the figure of 39. In addition, 38 dispensaries, established by "War Against Tuberculosis" Societies, with the help of the Ministry, are very active in various parts of the country.

RESEARCH

Apart from the activities of the stationary dispensaries, the teams, equipped with mobile microphoto röntgen apparatus, which have been formed are carrying out research inspections in more densely populated areas and in places where the population is large, and are treating those found to be infected with tuberculosis.

INSTITUTIONS FOR THE ISOLATION AND TREATMENT OF INFECTED PERSONS

Great efforts have been and are being made in order to ensure the isolation, care and treatment of infected persons, and to increase the number of tuberculosis beds. Thus, whereas five years ago there were approximately 1,000 beds in the seven institutions belonging to the State, the figure to-day has risen to 6,357 beds in 63 institutions, and efforts are being made to raise the figure to 10,000 within a short time and as a first stage.

TUBERCULIN TESTS AND BCG APPLICATION

In the fight against tuberculosis, not content alone with the provision of treatment and care of the sick, the supervision of those who are well and those who show some disposition to the illness is the object which is being, at the same time, aimed at. In Turkey tuberculin tests were made for the first time in 1921 by the application of the Pirquet method. Although in 1927 a start was made with the inoculation, through the mouth, of new born children, this method is no longer being continued. In 1949 a beginning was made with the application under the skin of BCG, a preventive of great value. At first, in a humble corner of the Refik Saydam Institute of Hygiene, activities were begun in 1954 with the restricted quantity of BCG in the new building erected in conformity with the principles established by the WHO and UNICEF, and this service has been described and registered by the above-mentioned organizations as an Institution which in every respect is working well, amongst others of the same kind in other parts of the world. The innoculation of BCG by the under the skin method is at present being applied locally in 28 provinces. In addition, in 1953, with the assistance of WHO and UNICEF, a BCG Campaign has been opened embracing the whole country, and the inoculation of the population of several provinces has been completed. The Campaign continues. Up to the end of August 1953, 1,228,334 Tuberculin tests have been made in Turkey, and 493,545 people have been inoculated with BCG.

DEVELOPMENT CENTRE

With the object of training qualified tuberculosis personnel to conduct the campaign which has been entered upon, under an agreement made between the Government and WHO, an "International Tuberculosis and Demonstration Centre," founded in Istanbul in 1950, has, by means of the courses which are constantly being opened, the training of the doctors of our own and neighbouring countries is being actively and usefully carried on.

PROPAGANDA

In the matter of enlightening the population, recourse is being had to all possible means. Pamphlets are being distributed, films shown, and conferences held.

LAWS ON THE SUBJECT OF TUBERCULOSIS

In 1930, the general law on the subject of hygiene was passed whereby the notification of the fact of sickness and of the death of those suffering from tuberculosis has been made compulsory by those interested; provision has been made for making the necessary analyses in the Government Laboratories and for the scientific disinfection of districts where the sickness prevails, free of charge; the isolation and treatment of contagious tuberculosis cases has been secured; steps have been taken to prevent those who, by reason of their profession or trade, might subject children to infection, from pursuing such trade; and the application of measures designed to afford protection against tuberculosis and the supervision of the campaign activities of the Tuberculosis Campaign Organization has been placed under the authority of the Ministry. Under a Law passed in 1949 and entitled "Law for the Fight Against Tuberculosis," powers have been taken to establish Tuberculosis Campaign Organizations in places where, in the opinion of the Ministry, they are necessary; to erect or to purchase buildings; to establish and equip them and to bring them into activity; to create Tuberculosis Institutions and Societies for the war against Tuberculosis; and in order that they may pursue their activities to give all kinds of assistance in money or in kind, as considered necessary by the Ministry, and to treat Tuberculosis cases at the cost of the Ministry.

New Malayan Commissioner for United Kingdom



INCHE OTHMAN MOHAMED

THE NEW COMMISSIONER for Malaya in the United Kingdom, Inche Othman bin Mohamed, arrived in England from Malaya on September 26, to take up his duties at Malaya House in succession to Raja Sir Uda.

Inche Othman is the second Malay to be appointed as Commissioner. Like Raja Sir Uda, he was Mentri Besar (Prime Minister) of the State of Selangor before his appointment in London.

Inche Othman was born at Klang, Selangor and was educated at the Victoria Institution, Kuala Lumpur. He joined Government service in 1925, and was in the Selangor Land Office and State Treasury before

being posted to several districts in the State as an Assistant District Officer.

He came to England in 1934 for about six months, and on his return was appointed to the Malayan Civil Service, and shortly after became Secretary to the Sultan of Selangor. Later on he was the First Magistrate, Kuala Lumpur and also Secretary to the Colonial Service Organization Committee.

He was then transferred to the State of Negri Sembilan as State Secretary and returned to Selangor as State Secretary in 1950. He held this position till March 1953 when he succeeded the Mentri Besar, Raja Sir Uda, who had been appointed Malayan Commissioner in the United Kingdom.

His wife and two sons and two daughters accompanied him to England. His eldest son is studying Law at Cambridge University.

Just after Inche Othman left Malaya, a new main road at Petaling Jaya, satellite town six miles south-west of Kuala Lumpur was named Jalan Othman in appreciation of his services in developing the new town.

Kirgizia*

THE DUNGAN AND UIGHUR MINORITIES

THE UIGHURS AND DUNGANS are two distinct national minorities living chiefly in the eastern territories of the Kazakh and Kirgiz republics, though they are also to be found in much smaller numbers in Uzbekistan and Turkmenistan. The common feature which unites them is that they both come originally from China, having migrated to Russia from Sinkiang at the time of the rebellion against the Manchus in the seventies and eighties of the last century.

THE DUNGANS

The history of the Dungans is easier to follow than that of the Uighurs who belong to an ethnic group of some complexity. The Dungans are descended from Turkish-speaking Muslim settlers in Kansu, parts of Shensi and Ningsia, and are of the Mongol race. They differ, however, both from the Chinese, among whom they formerly lived, and from the

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Mongols of Outer Mongolia, from whom they became detached at an early date, in being ardent Muslims.

DISTRIBUTION

Those who migrated to Russia settled as compact groups of cultivators mostly in four districts of Semirechye, an administrative unit of what was then called Russian Turkestan, now part of Kazakhstan, avoiding only for some reason the Kopal and Lepsinsk areas. Their number at the time of the 1897 census did not exceed 14,130, or 1.43 per cent of the total population of Semirechye. A small group of Dungans migrated further west to the Fergana Valley (1,640 in all), and 509 of them turned up in what was then called the Syr-Darya administrative district. The total number of Dungan immigrants was, in 1897, 16,279 or 0.30 of the population of Russian Turkestan. It is of note that no attempt was made by them to settle in the khanates or emirates of Central Asia.

During their short sojourn in Russia, the Dungans have suffered little extraneous pressure and have been able, it is claimed, not only to retain their own language, religion and some of their customs and ways of life, but to reach a state of prosperity unusually high for the native population of Eastern Kazakhstan. At present the Dungan community in the USSR still numbers under 25,000.

THEORIES OF THEIR ORIGIN

An article in *Sovetskaya Etnografiya* of 1954, on the origins of the Dungans, discusses the various theories of their origin. One, that they are of common stock with the Uighurs, is held to be impossible because of the fact that the Dungans use Chinese characters in their ordinary writing, and Arabic script only for their sacred books, which differs from the practice of the Uighurs. A second theory assumes that Dungans did not migrate to China but are an aboriginal Chinese Mongol race who became converted to Islam. This is not upheld by recent research. A third theory of a common origin for Chinese and Dungans is advocated by the Muslim leader Ma-Khun-Kui, the president of the provincial government in Ningsia under Kuomintang, but is not borne out by historical facts.

The theory in favour is that the Dungan people are Muslims who migrated to China from Persia, Arabia and Central Asia. They formed part of a Mongol army composed of subject tribes, which had as its object the conquest of China and the destruction of the Sung dynasty. This army numbered in all some twenty or thirty different tribes. The

Dungans formed the largest section of the armies on the Chinese western border, their number being estimated by Chinese historians at from two to three million men. Among these were armourers, engineers, officials and craftsmen. There are even references to a Dungan fleet. Mention is also made of Dungan civil servants, scholars and technicians serving the Mongol emperors in various Chinese provinces.

DISTRIBUTION IN CHINA

After the Mongol conquest of China, the Dungans spread rapidly with the invading armies over the whole country. At the downfall of the Sung dynasty in 1279, some Dungan troops were left in the Chinese plain for garrison duties while others were stationed along the coastal regions. The north-west provinces, near the borders of Persia and Arabia, were the first to be conquered and the Dungans penetrated there in a continuous stream, which explains the presence to-day of so many of them in the provinces of Sinkiang, Kansu, Shensi, Ningsia and Chirghai. Under the Yuen dynasty, Dungans penetrated to all parts of China.

The so-called "Chinese Muslims," consisting of Dungan soldiers, aristocrats, officials, scholars and technicians, merchants and "ordinary people," as they increased in numbers gradually formed the Dungan people. These original immigrants to China were joined by some Turkic elements from Central Asia, and a certain amount of intermarriage with Chinese women took place. A number of Mongols who turned Muslim, as well as some Persians and Arabs already settled in China before the Yuen period, also mixed with the Dungans there. The Dungans are thus seen to be the product of a mixture of people from Persia, Arabia, Central Asia and elsewhere, in addition to Chinese, Mongolian and other elements.

The article goes on to state that the Dungans form one of the largest minority groups in China, estimated by Soviet specialists at from seven to eight million inhabitants. They live along the main Kashgar-Peiping road, but are mostly concentrated in the Kansu, Shensi and Sinkiang provinces. Owing to their "weak territorial consolidation," it has not been possible to accept them as a nation, but, with the creation of the Chinese Peoples' Republic, their national rights have been recognized and their first two national raions organized in north-west China.

DUNGAN LANGUAGE AND ALPHABET

The spoken language of the Dungans living in the USSR, evolved from the Kansu and Shensi dialects of Chinese, contains a smaller number of

Arabic words than the language of the Sinkiang Dungans and differs somewhat from it in phonetics, morphology and syntax. Up to 1927 the Dungans of the USSR had no written language; the first alphabet to be drafted for them in Soviet times was based on the Arabic script. This was, however, rejected in 1927 at a conference of native and Russian linguists, who finally brought out a latinized alphabet in 1932. In 1937, new regulations were made for dealing with the Dungan orthography and it was decided that their alphabet should be based on the Russian one, in accordance with the general policy of russianizing the scripts of national entities.

The general rules and principles governing the new scripts have only recently been approved in detail. There has been no question of contradictory dialectical usage, as the decision was made from the start to accept the Kansu dialect, using Shensi deviations only occasionally.

In May 1953 at a gathering in Frunze of the Kirgiz branch of the Moscow Academy of Sciences, a hundred Dungan, Kirgiz, Kazakh, Uighur and Russian specialists met to discuss, mainly the language problems confronting the Dungans. A prominent part in these discussions was taken by A. Kalimov, a young Dungan linguist, who read a paper on the principles of the new alphabet and the rules governing its orthography. In line with the general trend of Russian practice, no attempt was made to insist on too close a phonetic transcription, which might have imperilled the universal use of the new alphabet by the Dungans. The Conference hailed the decisions taken as an outstanding example of the achievements of the Communist Party in Kirgizia in its dealings with national minorities.

SCHOLASTIC ACHIEVEMENTS

Much is being made of the scientific achievements of a few young Dungan historians, especially of the young Dungan orientalist, Sushanlo, who joined the preparatory class of the State Pedagogical Institute at Frunze in 1935 and graduated from there in 1941. Sushanlo studied as a post-graduate student at the Institute of Oriental Languages of the USSR Academy of Sciences, at which he had access not only to the orthodox works of the leading Marxist classical writers, but to those of the Chinese revolutionary leader, Mao, in their original text—a task not too difficult for a Dungan scholar. Later, Sushanlo worked among the archives of Leningrad, Alma-Ata and Frunze with their invaluable collection of orientalia. As a result of his researches, he published a dissertation on the “Dungan rebellion in north-west China in the second half of the

nineteenth century and the part played in it by Bai Yan Hu." This article, which deals with the struggle of the Chinese and their own national minorities in China against the Manchus, sets out to prove that the rebellion was an anti-Manchu peasant rising and paved the way for the successful national struggle for freedom, now attained by the coming to power of the Chinese Communists.

Sushanlo remains, however, an exception, for even a cursory study of available data on educational facilities among the national minorities makes it clear that the schools are not in a position to mass-produce the type of student for which the universities are clamouring.

WAY OF LIFE

In their homeland the Dungans were mostly agriculturalists and brought to Russian Central Asia the knowledge of rice cultivation, fruit and vegetable growing and the production of opium, the latter forming a vital commercial asset to them at the present day. Opium was first made known in eastern Asia by the Arabs as a medicine, and since the eighteenth century has been widely grown as a narcotic. It was first introduced into Semirechye in 1916, by both Uighur and Dungan cultivators, who brought with them from the Chinese, the pioneers of opium growing, a high level of technical skill in its production.

The Soviet press readily concedes that the Dungans possess great agricultural skill. Practically all their settlements, it is claimed, are now provided with electric power and they rank first in their districts as producers of rice, opium and cotton. It is stressed that the Dungans, after their migration to Russia, soon acquired more progressive ideas in their everyday life, and gave up, for example, the harmful practice of binding the breasts and feet of their women.

The Dungans in their early days in Russia owned their land on a communal basis. Communist historians state that abuses soon appeared and malpractices which resulted in inequalities of wealth and growth of the *kulak* class. Collective ownership persisted only in name.

It is of some interest that the Dungans coming to Russia made it their habit to settle in compact groups of population, even within city boundaries. This was made possible by the considerable amount of land made available to settlers.

THE UIGHURS

The press of to-day has more to say about the Uighurs, a people representing the most easterly branch of the Turkic tribes. At the present

time the Uighurs form the predominant part of the population of Eastern Turkestan, i.e., of the Chinese province of Sinkiang, and a few Uighurs are settled in the basin of the Ili river where they are known as Taranchi.

HISTORY AND DISTRIBUTION

It is difficult to define the ethnic origin of the Uighurs. Whatever they are, they are certainly not Chinese Uzbeks as an authority on the geography of the USSR recently asserted. It is, however, well established that in the ninth century they were driven by tribes of Kirgiz origin from the sources of the Yenisei river. Outside the USSR they number several millions and even in Soviet Central Asia are much more widespread than the Dungans. They live in compact groups in the east of the Alma-Ata oblast and to a lesser extent in Andizhan, Fergana and in parts of the Kirgiz republic.

According to the 1939 census, the number of Uighurs in Uzbekistan amounted to 50,600 or 0.8 of the 6,271,300 inhabitants of that republic. Many of them are settled in the Andizhan oblast and, together with the Dungans, are established in Kazakhstan in the Alma-Ata and Taldy-Kurgan oblasts. Uighur settlements are also to be found among Uzbek and Tadzhik enclaves in the south of Kirgizia, those of Dungans in the Chu valley and in the vicinity of Przhevalsk and Osh.

A recent book written by M. Kabirov, dealing with their migration into Russia, has been violently criticized on the grounds of its distortion of the facts and of the incomplete consideration given by the author to the involved international situation of the sixties and seventies of the last century. He has also failed to stress the predatory policies of the "British colonizers" of those days, and their design for the conquest of Eastern Turkestan. At the same time the author praised the national policies of the feudal khanates and emirates. The book was considered so weak ideologically that it had to be returned to the author for drastic revision in line with party politics. The department concerned with Uighur-Dungan culture at the Kirgiz Academy was particularly blamed for not taking the trouble to discuss the thesis before publication.

LANGUAGE AND ANCIENT ALPHABET

From the linguistic and cultural point of view the Uighurs are closer to the Uzbeks than to any other ethnic group in Central Asia, though in their language there are fewer Persian and Arabic elements. They are Sunni Muslims and according to Soviet experts, their beliefs retain traces of a primitive animism.

The ancient Uighur script is supposed to be derived either from Aramaic or from the script used in Sogdiana, the ancient province corresponding to the modern districts of Samarkand and Bukhara. It is said to have been used as the court script of the Golden Horde from the thirteenth to the fifteenth century and to have survived to some extent until the seventeenth or eighteenth centuries. With the spread of Islam, the original Uighur script was supplanted by the Arabic alphabet. Modern Uighur, within the USSR, is represented by two basic dialects: the Ili dialect used in Kazakhstan and the Kashgar-Yarkend dialect spoken in Uzbekistan.

MODERN LINGUISTICS AND THE NEW ALPHABET

Lately much attention has been paid to Uighur linguistics and to the general level of education among Uighurs in rural districts. Five years ago, a department of Uighur-Dungan culture at the Academy of Sciences of the Kazakh SSR was formed where much study has been done in the field of linguistics. New textbooks for elementary and secondary schools for the study of the Uighur language and literature have been produced and various schools for Uighurs exist in Kazakhstan. Young Uighur scientists are stated to be working on a number of problems in connexion with history, language and literature of their country.

In this connexion, the Dungan-Uighur section of the Kirgiz Academy of Sciences has also received reinforcements from Moscow and Leningrad for the purpose of compiling a Uighur-Russian dictionary. At the same time all traces of "Marrism" in Kirgiz, Uighur and Kazak dialects are to be ruthlessly eliminated.

In 1947 a decree issued by the Presidium of the Soviet of the Kazakh Republic marked a major departure from past practice: the Uighur alphabet was to be no longer based on Latin but on Russian characters in response, it was claimed, to the demand of a large number of Uighur kolkhoz workers, industrial labourers and local intelligentsia. This new alphabet was to be composed of 41 characters, 33 taken from Russian and eight devised to represent sounds peculiar to Uighur phonetics. The change-over was to take place progressively in the schools; in the case of primary schools and the lower forms of the secondary schools by 1947, but not till 1948 in the seven-year and the middle schools. The native press was to adopt the new alphabet in 1947.

SCHOOLS FOR UIGHURS

Much attention is now being paid to the Uighur schools. In the Alma-Ata oblast, the number of schools is expanding rapidly though as yet not

enough attention is given to instruction in the senior forms. In five Alma-Ata raions Uighur children are taught in their own language at the Uighur primary schools and very exceptionally up to the seventh form. In most cases, after completing their fourth form, Uighur children are transferred to Russian or Kazakh schools on account of the lack of any middle school in which the entire curriculum is taught in Uighur. In the so-called Uighurski raion, however, there are six Uighur seven-year schools, but not a single ten-year one. In some Kazakh schools Uighur children can be taught in their own language up to the seventh form and are then transferred to the two leading Uighur schools at the Bolshe-Aksu or Bolshe-Ketmen Uighur settlements.

There is not a single Teachers' Institute which qualifies instructors to teach children of the fifth to seventh classes in Uighur schools and the only available instruction for teachers of primary schools is at the Panfilov and Turgen Teachers' Institutes. Thus, it seems, that the whole problem of teaching Uighur children in senior classes in their own language is still awaiting solution.

Even at the Aksu and Ketmen schools, instruction is not on a high level, and twenty girl graduates from Bolshe-Ketmen recently failed in entrance tests to a Teachers' Institute in Russian, Kazakh and a foreign language examination. At the large Ketmen school for 450 Uighur kolkhoz children, Russian is not taught at all in the senior classes, as the Russian teacher, who was appointed some time ago, failed to turn up. For several years in the higher forms of this school there has been only one Russian text-book for the use of thirty to forty pupils and the library is poorly stocked, without even a Mayakovski on its shelves. At the Bolshe-Aksu school, with accommodation for 900 pupils, there are no Russian textbooks for the fifth and sixth forms, and the rules of grammar have to be written on a blackboard, causing considerable waste of time.

Other reports stress the lack of textbooks in the Kazakh schools open to Uighurs, though large numbers of Uighur children attend these schools. Moreover, in the lower forms, Kazakh and Russian teachers are hampered by their ignorance of Uighur. Altogether Uighur children have considerable difficulties to overcome in the course of their education: they are supposed to have a thorough knowledge of the Kazakh language in the eight to the tenth form, though this is practically impossible for them. The middle schools do not always teach foreign languages, and graduates from the Selo Dubun and other schools have been known to reach their eighth form without knowing even the rudiments of any foreign language.

Uighur children must study four languages: Uighur up to the seventh form, Kazakh, Russian and another foreign language from the eighth form till their graduation. The result has been a scanty knowledge of all

four languages and has caused the eighth form to be crowded with pupils attending the same form for the second year.

The obvious solution—to continue instruction in Uighur throughout the middle school—is made impossible by the lack of qualified teachers. Moreover, the Uighur students with their limited knowledge of Russian or Kazakh would in such circumstances find it very difficult to qualify for the higher educational establishments.

To extend the number of boarding schools is proposed as a solution, but accommodation in these is limited. In the Bolshe-Ketmen school only 80 out of 120 applicants can be admitted and at the Bolshe-Aksu only 120 out of 200.

Deficiencies are also to be noted in school buildings and equipment. In the Aksu school, desks have not been repaired, and three children share a desk intended for two. Ventilation is inadequate and in one class-room a ceiling crumbled recently after heavy rain. Diagrams and visual aids for the study of physics and chemistry are lacking and in general there is a shortage of teachers for foreign languages and mathematics. Many teachers are very young and unqualified; at the Chundzha school a German master turned up recently with practically no knowledge of the commonest German words. For some schools no headmasters can be found with suitable qualifications.

Up till now, in fact, the schools in the Uighur raion have been badly neglected.

HIGHER EDUCATION

In contrast with this rather gloomy picture of the school situation, there are glowing reports of Uighur youth freely mixing at Alma-Ata with Kazakhs, Uzbeks and Russians, both in and out of class. At the Kazakh State University more than twenty Uighurs are studying journalism, biology and chemistry, while others are attending the mining, medical and veterinary institutes. Still others are to be found in the Vuz of Moscow, Leningrad, Tashkent and Frunze and there are even ten post-graduate students. A woman Uighur student has recently delivered a thesis on the "Public and Family Life of Uighur women in Kazakhstan," which is the second ethnographic work on the Uighurs to appear. Her opponent was the celebrated Professor A. Bernstam, at one time a deviationist.

It therefore seems that, given the necessary educational facilities, Uighur students are able to hold their own in competition with students of Kazakh and even of Russian nationality.

Agrarian Reform in Egypt

SINCE THE 23rd July, 1952, Egypt has seen national reforms launched and make progress. The fundamental structure of the country has been rejuvenated by legislation designed to sweep away all that had been impeding national progress and activity.

Among these has been the long needed agrarian reform, making a drastic change in the country's agrarian pattern. Possession of agricultural land had grown in Egypt to be the most reliable and the most tempting form of capital investment. Prices of good land exceeded the extraordinary figure of £1,500 per acre. On the other hand wages for the farm workers were far too low to afford them anything approaching a decent standard of living. Under these conditions there was but slow progress in other spheres which needed capital investment to move ahead, for land was the big attraction and the handful of big landowners lived luxuriously on the income from their estates while the great mass of the population were in misery. As population increased so these conditions became accentuated.

At the beginning of the present century Egypt's population was 11,000,000 and the total cultivated area was 5,097,000 acres in possession of landowners. During the last fifty years the population has grown to 21,000,000, yet cultivated land only moved up to 5,962,660 acres held now by 2,760,661 landowners. The growth in the numbers of landowners during this period has been seen almost entirely among the landlords of the smallholder variety, owning five acres or less and a high proportion of whom owned only a fraction of one acre. The numbers of the bigger landowners remained almost stationary, as did their holdings.

NEW LAW

Now the new law and agrarian policy has fixed 200 acres as the maximum area of agricultural property which can be in the hands of any single individual. Any area in excess of this limit is being requisitioned by the Government during the coming five years against nominal stocks, payable in thirty years, with an interest of 3 per cent.

The compensation price paid for requisitioned areas is being stabilized at 70 times the normal land tax. This concerns 2,115 big landowners—or only eight in ten thousand of the total number of landowners. Yet the area in the possession of this landed class amounts to no less than

1,208,491 acres, or 19 per cent of the total cultivated area of the country. The total of land to be taken over from these big landlords is calculated to be about 600,000 acres and this area is being sold in lots of between two and five acres to small cultivators who now possess less than five acres. The price of this land to them will be 15 per cent above that paid by the Government; it will be paid over a 30-year period with interest at the rate of 3 per cent. To keep holdings on an economic footing, there will be no future subdivision of any areas of five acres or less.

MANAGEMENT

To ensure the proper management of these farms and land, the law on agrarian reform makes the formation of co-operatives among the new landowners obligatory and these groups will receive guidance and supervision from the Ministry of Social Affairs. The law has also taken within its scope the fixing of minimum wages for farm labourers and there are special regulations to ensure security of tenure. Rents for such land are also being fixed with a maximum calculated at seven times the government's land tax.

These are the broad lines of this major reform. They are in complete harmony with the United Nations general recommendations on this subject.

LAND DISTRIBUTION

Since the law was promulgated on September 9, 1952, a total of 254,532 feddans of land has been requisitioned. Of this total 49,163 feddans has already been distributed to landless peasants since the programme for distribution of land commenced on July 23, 1953. The total acreage distributed so far will affect 13,442 families; the total number of individuals who will benefit, therefore, is 79,180. This important work is being done by the Higher Committee in charge of the Agrarian Reform Programme.

This Higher Committee will not only see to it that the land distributed goes to the new landowners, but will also supervise the cultivation of the land immediately after distribution. This, in addition to numerous facilities given to those who need them in the course of cultivation and harvesting. These facilities will greatly improve production as well as secure for the fellah the highest possible income. Out of this income the new landowner will pay the annual instalments. Recent announcements by the responsible spokesmen of the Higher Committee indicated that as a result of land distribution and zeal and interest shown by the new

landowners together with the advice and help given by the Higher Committee, yield has increased in both Lower and Upper Egypt.

The contrast was clear in neighbouring Pre-Revolution plantations where the yield has remained the same since the old system of cultivation still prevails.

CO-OPERATIVES

It remains true that the backbone of the Agrarian Reform Programme is the efficient administration of the Co-operative societies at work. In each of these Co-operative Societies the Higher Committee has a representative. This representative is to make sure that the policy rules laid down by the Committee are being observed. These co-operatives have to render to landowners many useful functions, such as securing loans of mechanized agricultural implements, fertilizers and seeds. The success of these Co-operatives was so striking that the Higher Committee is seriously contemplating the establishing of a Co-operative union to embrace representatives from the various Co-operatives.

The ultimate aim of the law, from the economic point of view, is to raise the standards of living without neglecting considerations of equity. Priority when assigning land is given to peasants who were cultivating the land when the law was issued. The whole system is based upon the idea that the amount of land allotted should guarantee the new owner a certain standard of living, scientifically studied and calculated.

In distributing those allotments to families the first consideration is taken of the number of its members, and of the income to keep the family as one unit, and not of any particular individual—consequently the land allotted to a particular family cannot be divided up by the members of that family on the occasion of the death of its head.

The Agrarian Reform Law is not in any way confined to distribution of land to landless peasants, but has other far-reaching aims and functions. It aims, among other things, at developing the rural industries, improving livestock breeding and to introduce mechanized farming.

The Higher Committee will have the welfare at heart of all those families brought under its supervision, and all profit made by that Committee will be utilized in social and economic schemes in the interest of the farmer himself. Last but not least, the Higher Committee is actively engaged in planning to start a dairy industry in Lower Egypt.

Djakarta's Satellite Town

LIKE MANY other capital cities at the end of the last war, Djakarta faced a very serious housing shortage. It has been estimated that 2,000 houses were destroyed during the Japanese occupation and the ensuing Revolution. Moreover the population had been increasing steadily. In 1940, 25,000 had been needed to reduce the average number of persons per house from the actual 9.2 to the desired 6.5, but only a half hearted attempt was made to provide them at that time.

By 1948 the number required had risen to 85,000 if the 6.5 average was to be achieved. It was not possible to build on such a large scale in Djakarta itself, so in July of that year the Central Housing Council met to discuss the possibility of relieving the congestion of the city by building a completely new town nearby.

The area selected as the most favourable was a sparsely inhabited plain of 730 hectares, 10 miles south-west of Djakarta, lying between two rivers and suitable for the rapid construction of roads, sewers, etc. Plans were drawn up by Mr. Susilo, of the Central Planning Bureau, for such a new town, which was to be called Kota Baru Kebajoran (Kebajoran New Town) after the neighbouring town of Kebajoran.

The plans were approved by the Council in September 1948 and in January 1949, the area was purchased by the Government. The town, intended to house 80,000 people, was to be built within five years and would also have shops and business premises to provide local employment.

In order to ensure the efficient execution of the project, the work was entrusted to the Central Reconstruction Institute, which had been established by the Government shortly before. Many changes were introduced after the Transfer of Sovereignty, the power of the Institute (finally dissolved in 1951) being drastically curtailed by the Ministry of Public Works and a new body—the Central Construction Authority—was set up. In January 1952 the latter body became an independent office within the Ministry, complete with its own budget.

The Central Construction Authority set up its own factories and workshops, a supply organization which obtained materials and equipment from all sources, a factory for the production of fashioned timber, a sand and stone quarrying enterprise, a repair workshop for vehicles connected with the project and an asphalt and concrete factory producing road hardening materials, culverts, sewer pipes etc.

One of the chief problems which arose was the determining of the price of the land. The Government had invested a considerable sum of money in the project and sought to recover its capital outlay as soon as possible, principally by the sale of land as building plots, which from the commercial point of view should have taken place within the year.

On the other hand it was still too early to be able to tell how much land would be needed for public and social buildings, it having been planned to use at least 46 per cent of the land for a green belt and regulated open spaces. There was also the question of settling differential prices for various income groups, so that no land prices could be fixed until the buildings were more advanced. The Government decided, therefore, to waive its interests for the time being and to allow the land to be rented, rent regulations being introduced in January 1950.

Communications with Djakarta were of the utmost importance and a fine highway was built across the green belt, consisting of four roads, all dual-carriage way. A viaduct was constructed across the flood channel and a railway was built. A network of roads spread over 181.5 hectares, was planned for the town and municipal parks were laid out.

An area of 323 hectares was set aside for the construction of 7,546 houses and shops, all with ample garden space. Houses were planned with two, three, or four bedrooms; only one family was to occupy one house. These houses were to be built in Indonesian style, great care being expended on ensuring pleasant designs. A fair amount of standardization was introduced for Government builders and although considerable latitude was allowed to private builders they had to comply with various regulations.

By 1951, 276 houses had been built privately by large firms to accommodate their personnel. From the time of the formation of the Republic until 1951, some 2,000 houses were erected to house Government officials, who had been transferred from Djogjakarta to Djakarta.

Though while building was in progress temporary buildings were necessary, it was intended that eventually no temporary structure should be permitted. 600 semi-permanent houses were allowed as they would be cheaper for poorer people. Also under construction are 32 schools, a Police Station, a Post Office, flats for Ministry officials, and a 600-bed hospital complete with staff quarters.

It was imperative that so large an estate should have a first class drainage and sewerage system. Within two years a central sewerage system was constructed, in accordance with plans drawn up by the Department of Water and Sanitation, connected with the River Grogle, just north of the town. A water drainage system was also built on the same principle.

Each house was supposed to have mains water laid on but such was the shortage of fresh water in Djakarta it could not come from the capital. River water purification installations were already being constructed at Karet and it was decided to lay a pipeline that would eventually join up with these. In the meantime nine artesian wells were sunk, sufficient to supply 15,000, and reservoirs established to control the intake. The work at Karet is still in progress as much of the material necessary had to be obtained from abroad, but most of the houses at Kebajoran are now supplied from the wells.

Likewise Djakarta was unable to supply the new town with electricity. Power stations had to be built in the surrounding districts of Antjol, Karet and Kebajoran. In the interim period a temporary station with three diesel generators supplied the town. Plans for laying on gas are also being discussed.

Though this enterprise has received little publicity, the effort and the energy put into it, during times of great political and social upheaval, has made it one of the most successful experiments of its kind in Indonesia.

Review

CENTRAL ASIAN REVIEW. This journal, now in its third volume, deals with one of the least known areas of the world: Soviet Central Asia.

It is published quarterly by the Central Asian Research Centre in association with the Soviet Affairs Study Group of St. Antony's College, Oxford. It aims at presenting a coherent and objective picture of current political, social and material developments in the five Soviet Socialist Republics as they are reflected in Soviet publications.

The selection of material is designed to represent positive achievements and shortcomings in the same proportion and with the same degree of emphasis as they are represented in the Soviet press and other Soviet publications. Explanations and background material are added where these seem to be necessary.

The subscription rate is Thirty Shillings per year, post free. The price of single copies is Seven Shillings and Sixpence. The Distributing Agents are Luzac & Co.

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In printing the article on "The Turkmen Population of the Khorezm Oasis" in the last issue of ASIAN REVIEW mention that it had been reproduced from the *Central Asian Review* published by the Central Asian Research Centre was inadvertently omitted. The article was in fact not an extract from but an abridged translation of G. E. Martov's original article in *Sovetskaya Etnografiya*.

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Impressions of India and Pakistan

By Sir PERCIVAL GRIFFITHS, CIE

A JOINT MEETING with the Pakistan Society and the Over-Seas League was held at Over-Seas House, St. James's, S.W.1 on Wednesday, 19th January, 1955, when Sir Percival Griffiths, CIE, gave an address on his recent tour of India and Pakistan. Sir JOHN WOODHEAD, GCIE, KCSI, was in the Chair.

Sir JOHN WOODHEAD said: Before I introduce our speaker this evening I have a very pleasant duty to perform and that is to welcome, on your behalf, His Excellency Mr. Ikramullah and the Begum Ikramullah who arrived in London a few days ago. Mr. Ikramullah has taken over charge of the Office of the High Commissioner for Pakistan in succession to Mr. Ispahani. He only took over charge yesterday, and we are under a deep obligation to him for being with us this afternoon. I am sure you would like to extend to Mr. Ikramullah and his wife a very hearty welcome and to wish Mr. Ikramullah every success in his high office in London.

Sir PERCIVAL GRIFFITHS: Once before when I had the privilege of speaking in this room I lamented the fact that on my return from a tour of the East I am invariably asked to give a succinct answer to such simple questions as "How is India?" and "What are things like in Pakistan?" On that occasion I explained that it was my normal practice to decline to be drawn into any such over-simplifications. But to-day, if I were in fact forced into a corner and asked to give my impressions in a few words, I think I should say without hesitation that although in some directions I saw ground for encouragement, on the whole I was a little less happy about both India and Pakistan than I was when I spoke to you twelve months ago. And then of course having made that provocative statement I should have to particularize, and beginning with India I should say that although the economic progress of that country and its political stability are encouraging features, I found myself nevertheless rather disturbed at a marked shift in economic policies and economic thought illustrated by certain contemplated legislation calculated to strike a rather serious blow at the foundations of business. This legislation, which has already begun to create apprehensions in the City, must, if

persisted in, inevitably make it more difficult for India to obtain that foreign help which she so urgently requires. Of Pakistan I should say in this succinct form that in the political sphere I see two different causes for anxiety which I will particularize presently, that it seems to me that Pakistan has a more difficult political problem on her plate at the moment than she has had since her creation; and in the economic sphere she is only just beginning to recover from another crisis, a crisis brought on—one must speak quite frankly about this—partly by a persistent over-spending and a refusal to recognize the signs of the times. Those would be my succinct answers to questions of the kind which I have described. I must go on from that to take each of the countries concerned and develop the themes which I have now summarily put before you. I propose to begin with India.

I am going to talk first about the trend of events and thought in India to-day, and I suppose as one goes about India and particularly as one sits in Delhi and watches what is going on there, one is impressed with the marked change that has come over the character of the Congress Party within the last eighteen months. Those of you who knew Delhi before that time will remember that the main pillars of the Congress Party were on the whole substantial men, professional men, well-to-do business men, highly placed educationalists, men distinguished in their own particular spheres, and they exercised a calm and moderating influence on the counsels of the back benchers in the Congress Party. When the last elections took place it was a matter of great satisfaction to us that they were conducted in so orderly a fashion; that they resulted, except in certain areas, in the discomfiture of the Communist Party, and that on the whole they displayed the sound political sense of the people of India. That satisfaction was justified, but I think few of us at that time realized the change which was coming over the personnel of the Congress Party. Few of us realized how the old substantial men who had formed the hard core of the Party were being rapidly replaced by people of a different character; people of much more limited and bounded experience; people who may have had some influence in their own village or in their own town but had previously very little part in national or wide-scale affairs. You only have to stand outside Parliament in Delhi to-day to realize that change. It has become the age of the small man.

Now when the small man got back into power he was a little puzzled about his own position; he was a little uncertain as to how much he was going to count for, and above all he was uncertain whether India really was treading the right path to the progress which he had been led to expect. He had been taught before the transfer of power that with independence there would be an upsurge of all kinds of development, and as a result

the standard of living would go up and he would soon begin to find himself better off. He looked round and he saw that this had not happened. He saw that although much has been done in the way of development it has not yet percolated down to affect the standard of living of the ordinary man in the small town, and he began to wonder why this was so. He wondered whether perhaps some of his leaders had departed from the true faith, whether they had lost the vision which inspired them some years earlier. He wondered whether perhaps they had surrendered themselves body and soul to the capitalists and had moved away from that path of progress which had been held up before him seven years earlier. In so far as he had been used to economic thinking at all, his thought was partly Gandhian and partly anti-capitalist. He did not think very much of the capitalist system in any case and he began to say to himself, perhaps the fact that we have not made enough progress in the past seven years is at least partly due to the fact that we have not broken away from that system. He came to Delhi for the first time in a somewhat left-wing and slightly disillusioned frame of mind, and when he got there he took stock of the situation and began to look at his own leaders, some of whom he was meeting for the first time.

It did not take him long to realize the amazing pre-eminence of Mr. Nehru; I shall come back to that theme later. It did not take him long to realize that there was nobody else in the Cabinet, however great his ability might be, who in any political sense could really count at all. He looked first at the figure of the Congress Minister, Mr. T. T. Krishnamachari, an old personal friend of mine and a man for whom I have the most profound regard. A man of boundless energy; a man who is wholly set on the progress of India; a man who is in many respects a realist and understands that if India is to progress, much of that progress must be brought about by capitalist agency. But Krishnamachari the realist, or rather a combination of realist and visionary though he is, is not a member of the old Congress Party; he has no personal following in the country and his position in the Cabinet therefore necessarily depends solely upon the regard which the Prime Minister has for him. Then you have Sir Chintaman Deshmukh, who next caught the eye of the new recruit to the Parliamentary Congress Party in Delhi—Sir Chintaman Deshmukh with a ripe experience of finance and affairs in general—perhaps not by nature very much of a fighter—but also, like Mr. Krishnamachari, lacking in any following in the country and therefore unable to take any very definite line of his own if the trend of popular opinion happens to be strongly against it. And he found other men in the Cabinet, each of them of value in their own sphere. Men like Gulzarilal Nanda, who has done a first-class job in regard to planning.

He found men of that kind, men of worth and of merit, but none of them able to count in the sense that Pundit Nehru could count, and he became impressed, as we are all impressed more and more year by year, with that quite astonishing dominance which Pundit Nehru, or Mr. Nehru as I think he now prefers to be called, has acquired. I have known nothing like it in India in my time except the kind of ascendancy that Mahatma Gandhi had in the old days.

Mr. Nehru is in the very true sense the heir to that kind of ascendancy. He is full of the most amazing energy, he carries out the most tiring and exhausting tours and campaigns of speaking, and when you meet him afterwards he seems to be utterly tireless and abounding in zeal and energy in the public cause. And on top of all that energy and zeal to the public cause he is animated by one single purpose and that purpose is the uplift of the ordinary man. You will fail to understand any aspect of Mr. Nehru's policy if you forget for a single moment that the only thing he really cares about is the uplift of the common man. Mr. Nehru's approach to the problem of uplifting the common man is not always that which you and I would wish to see adopted. His best friends would not call him a practical-minded man. He is a visionary pure and simple and he is very often apt to despise the methods by which the ends that he desires can best be achieved. By nature, I have very little doubt that his own bias is towards state socialism. In 1947 and 1948 his colleagues managed to persuade him that if India was to progress as rapidly as he wanted her to progress he must call in the aid of private enterprise, of the capitalist system. So he enunciated a doctrine of industrial policy which, roughly speaking, said that in most fields private enterprise would hold the day, that the state would merely take on what could not be done by the capitalist system. I think Mr. Nehru accepted that in 1947 and 1948 whole-heartedly because he believed it would show quick results. But like the left-wing of the Congress Party he, too, is disappointed. He too does not see that there has been any great change—and you and I probably know that there could not have been any great change—in the standard of living of the ordinary man in the years that have passed since the transfer of power. Mr. Nehru, like most dynamic people, is above all things impatient. He is not prepared to listen to reasons why things which affect the standard of living cannot be done quickly. They have got to be done quickly and anybody who cannot do them quickly is of no use to Mr. Nehru. So I think Mr. Nehru when he came back from China, where he was very much impressed with the tempo of development, began to say to himself: "I wonder if I was wrong in backing private enterprise. I wonder if my colleagues misled me in telling me that the capitalist system could deliver the goods; that the

capitalist system could set India quickly on the path of progress." I think doubt began to creep into his mind and I think one sees signs in his recent utterances and in some of his recent actions that he is rather beginning to wonder again whether some kind of state socialism rather than the capitalist system is not really the answer to India's needs. So the small man came back rather left-wing in his approach and found a Prime Minister himself journeying once again towards that same left-wing.

Then a third factor has, I think, been at work, I think that the thought of the economists, the writers and the intellectuals in India has been moving steadily during the past year, or perhaps even the past two years, towards the idea that real large scale progress can only come from state action, that it is hopeless to expect it from private enterprise. The argument they use runs something like this. India has to go ahead very fast otherwise she will fall into the hands of the Communists. If she is to go ahead fast the capital expenditure involved must be of a vast order and some of them talk of 4,000, 5,000 or 6,000 crores of rupees. They then go on to say that the rate of private saving in India is such that there can never be any hope of raising enough money to make even the faintest impression on this vast problem. And they go on from there to argue that the only way in which things can be achieved in a big way is for the state to take them over. So many of them are beginning to write and talk now as though the progress of India depends mainly, if not wholly, on action by the state, which would itself have to borrow money from the outside world.

And so we have all three factors converging towards the same point. The inclinations of the small man who now forms the hard core of the Congress Party; the natural instinct of the Prime Minister himself, revived by his recent visit to China; and at the same time the pattern of thought of the economists and the intellectuals, all leading in the same rather left-wing direction. That new direction of thought, or at any rate the intensification of a previously existing trend of thought, has produced certain practical consequences and proposals in the sphere of legislation recently. I want to speak briefly about two of those proposals which are what I had in mind when I referred to the factors which were worrying people in the City here.

The two subjects I want to refer to in that context are the amendments to the Company Law and the proposed amendments to Article 31 of the Indian Constitution. In dealing with each of these subjects I will try to be as non-technical as is possible, though by their very nature they are not free from technicalities. Let me first take the proposed amendments to the Company Law. One of the most important elements in business

in India is the system known as the managing agency system. Put summarily, it may be explained like this, that instead of a particular company just owning a tea garden and running it or owning a jute mill and running it, or owning a coal mine and running it, a particular company will undertake the management of perhaps thirty or forty tea gardens, jute mills, coal mines or what you will. The function of the managing agent is to supply the *expertise*, and because he is concerned with such a large number of commercial concerns, he is able to have a specialist in each branch. He has a sales specialist, a tea making specialist, a jute quality specialist and in every branch he is able to provide a specialist and so effect a very great economy of *expertise*. Besides this, he makes available his vast financial resources—and in some cases they are really vast—to the companies which he manages, and in times of difficulty comes to their rescue and frequently gives them loans at times when the banks would not be prepared to undertake the risk. The system is one which has very obvious merits but it also has certain disadvantages, and one of the disadvantages is that it lends itself fairly easily to abuse in the hands of a corrupt and dishonest managing agent. Of recent years the attentions of politicians in India has been focused repeatedly on those sections of the managing agents who could be described as not very honest or not very competent, and the knowledge that the system in hands of that kind lends itself to abuse has led to a long-standing demand for its change and from some quarters there has even been the demand for its abolition.

An expert committee sat for something like two years examining the problem as to how to place the necessary limitations on the powers of the managing agents without killing a system which most objective observers regard as the keystone of business in India to-day. They produced a report which was remarkable for its sanity and its moderation. It proposed the necessary restrictions without suggesting any action which would in fact bring the system to an end. The proposals of the expert committee were accepted by the Government of India and a Bill to implement them was introduced a few months ago. Not very long ago, to our surprise, we found there had been a complete *volte face* with regard to this matter on the part of the Government of India in general, and the Finance Minister in particular. Here I have to speak with some restraint and limitation because the subject is under discussion by a select committee. We have no knowledge of the proceedings inside that select committee, and I can only talk to you on the basis of what is actually public knowledge and not on the basis of what might have taken place behind closed doors. At any rate it is fairly clear that two very drastic amendments are now proposed to the Company Law Amendment Bill,

the effect of one of which would be that in industries specified by Government the managing agency system would come to an end in 1960. That is an amendment of a very drastic character indeed; it is not made very much less drastic by the fact that the industries will not be specified within the Act itself but it will be left to Government to pick them out afterwards. I cannot stop to develop this theme in detail here, but just emphasize the fact that the managing agency system is the hard core of business in India, particularly is it the hard core of British business in India. Any action which brought that system to an end would do more than any other single action that I can think of to destroy confidence and to make the average business man, whether British or Indian, begin to say that it really was not worth while going in for schemes of development and schemes of expansion in a country which was prepared so lightly to destroy the foundations on which its main industries had been built up. I am not able to get inside the mind of the Finance Minister and I cannot tell you therefore exactly why this change has come about, but I think it is a pretty safe guess that really it is a surrender to that left-wing, that hard core of the Congress Party which I described to you a few minutes ago as having come into power in a fairly big way.

The other contemplated piece of legislation of an equally disturbing kind is with regard to the Constitution itself. Article 31 of the Constitution, roughly speaking, provides that a man may not be deprived of his property, for example, by acquisition for some Government purpose, except by law, and that the law which authorizes the acquisition of that property must provide for the payment of compensation. There has been a good deal of dispute as to what compensation means—whether compensation necessarily means fair and reasonable compensation, or whether any compensation that might be specified in the relevant law would be good enough from that point of view. Legal opinion has differed as to what the Section exactly means. Some people have said you can go to the courts and say that the law which provided this compensation is not a fair law, the compensation is not fair and reasonable, and therefore the action taken is against the Constitution. You can in fact, ask the courts to declare that action invalid. Although there was difference of interpretation about that Section until recently, many of the people most concerned rather took it for granted that it did in fact give them that kind of protection against arbitrary legislation bringing about confiscation of their property without fair and reasonable compensation. Certain cases in the courts, which I cannot stop to go into now, have recently suggested that all such acquisition laws are in fact justiciable. In other words the courts can say “This acquisition law does not comply with the terms of Article 31 of the Constitution, it

is therefore invalid and therefore the action taken by Government in taking over your property was unjustified and they must hand it back or alternatively they must pass fresh legislation laying down fair and reasonable principles of compensation." The Government of India were disturbed by the thwarting of their will in that kind of way by courts and therefore they are considering amending the Section to make it quite clear that in certain important fields any action taken under a law for the acquisition of property would not be justiciable. They want to make it quite clear for example that, if Government were to take action with regard to the managing agency system, it would not be competent for the High Court or Supreme Court to declare the action *ultra vires* of the Constitution.

Now I am not for a minute disputing the right of India to frame her Constitution in any way that she likes, nor am I oblivious of the fact that in many countries, including this country, one certainly has no constitutional protection against arbitrary legislation or arbitrary executive action of the kind to which I have referred. But the fact remains that that protection was put into the Constitution when it was first framed, and the fact that Government now, because it is not prepared to have its will thwarted by the judicature, is sweeping aside that protection must be a cause of anxiety and indeed of alarm to every thinking man. I myself have known no proposed legislation in recent years that has caused such widespread anxiety amongst all sections of propertied people, including business people in India, as this proposed amendment to Article 31. If it were just that by itself, people might not worry very much, since Government say in effect "Whatever the legal position may be, however much we may put ourselves beyond the reach of the judiciary in these matters, we do not in fact propose to treat you unfairly; we shall of course pay fair compensation for anything we acquire, we merely want to make certain that our aim of achieving the objectives of social justice is not hampered by judicial decisions." If this matter stood alone people might be willing to accept that assurance. But when they see the general left-wing drift, when they see the revived attack on the managing agency system and the lightheartedness with which the Government of India to-day are prepared to treat certain types of private property, when they see that and on top of it they hear that it is proposed to take away a Section of the Constitution which they thought gave them some protection, it is not a bit surprising that they become alarmed, and it is not a bit surprising that both in India and in the City there has been a considerable lessening of confidence from the business point of view.

Now India cannot afford that lessening of confidence. India wants more than she ever wanted before help from the outside world in every

possible form. Some of that help will come from other governments or from institutions, but she needs help too from the outside business world; she needs private capital, she needs technicians, and inside her own country too she needs to spur her own people to put all they can into industrial development. She will not achieve those aims if she persists with legislation of this kind, and if the Finance Minister were here himself to-night I would address a personal appeal to him with regard to this managing agency legislation to think again before it is too late. It will not do to pass legislation of that kind, and then turn round afterwards and say: "Don't worry; we shall not use unfairly the powers that have been entrusted to us." I feel certain myself that the Finance Minister and his colleagues, and possibly the Prime Minister himself, will realize the anxiety—and that is a very mild word for it indeed—which their proposals have called forth, and will be prepared to modify them before it is in fact too late. But those are concrete illustrations of that general left-wing tendency of which I have spoken in India to-day.

If I had not had to speak about the left-wing tendency—the rather shattering threatened legislation—in other respects I would have spoken on a fairly hopeful note about the Indian situation. Communism, to which I referred last year, seems to me to be reasonably under control. There has been anxiety as to what would happen in elections in Andhra or Travancore, but, speaking broadly, I would say that the Government are well on top, that although Communist propaganda continues unabated and unchecked, and is perhaps if anything growing in virulence, in spite of that India to me seems to be stable. I do not see any signs of a big subversive movement round the corner, and I am satisfied that the law and order which have been so well maintained in the past seven years are going to be well maintained in the years ahead. So that on all those matters, except for this worrying shift in economic thought, I would have been prepared to give India a clean bill of health, with this big qualification written across the bottom of it that economic policy must remain sane and moderate if India's progress is not to be seriously retarded.

I must now go over to Pakistan, about which I have a certain amount to say. Pakistan, I think, is a country which always attracts the utmost sympathy and interest of every one of us here, not only because many of us have served in it and have had close contact with its officials and its people, but it is entitled to our sympathy and our help as a young country, a country which came into existence seven years ago, and which still has to make its way in the world—a country which made a magnificent start from scratch and has made a great deal of progress since the time

when that start had to be made. And therefore every one of us here approaches the problems of Pakistan with a very great deal of sympathy. But that sympathy must not blind us to her difficulties, and we should be poor friends of Pakistan if we pretended that those difficulties did not exist in a somewhat acute form to-day. They fall into two classes—political and economic. I speak first about the political aspect of Pakistan's problems. I suppose one could say that her political problems fall into three heads. There is the problem of East Pakistan; the problem of the integration of West Pakistan, and lastly the problem of finding a proper balance at the Centre in which both East and West Pakistan will feel that they are co-equal partners.

Let me begin with East Pakistan. Before I talk about East Pakistan I have got to make a confession. I do not very often indulge in prophecies—I have grown a bit too wary for that—but I did indulge in a prophecy here last year in response to a question, and I have never been more completely wrong in any forecast than I was in that particular one. The question was: "What did I think would happen in the East Pakistan elections?" I said I thought the Muslim League would just about get back. Well, of course, the Muslim League did not just about get back; they just disappeared out of existence altogether in East Pakistan. The only comfort I take in the complete inaccuracy of my forecast is from the fact that I was in extremely good company. I found myself in company with all the leading politicians in Pakistan. I heard from my friend the Begum Shah Nawaz the night before the elections were announced and she said she was in great trouble with her Party; they were calling her a defeatist because she said they would not get more than 90 seats in the elections, the results of which were to be announced the following day. But that does not alter the fact that I was wrong, and hopelessly wrong, in my estimate, even though I had at that time just been round East Pakistan in quite considerable detail. Now let us go back to those elections and remind ourselves briefly of why that debacle took place. I think it is fairly clear that there were two reasons. One was a general local "fed-upness" with the incompetence and corruption of the Government which had ruled in East Pakistan for some considerable years. Do not let us beat about the bush over that; it was a bad and incompetent government and the local public had come to realize it. But on top of that, I think, there was another and much more serious factor. If it was just a question of "fed-upness" with a bad government, it would be a good and hopeful sign, but there was also a good deal of stress and strain, a good deal of irritation between the people of East Pakistan and the rule which was exercised over them from Karachi. Very often the

complaints of the East Pakistan people were not justified. They complained, for example, that they were neglected in the matter of development. That was not really true. Pakistan spent a good deal of money in East Pakistan and gave a good deal of attention to schemes of development there. But the fact remains that the people of East Pakistan felt that they were neglected; they felt that people in Karachi did not care about them, and they even felt that certain sections of the people in West Pakistan treated them with contempt.

Now the important question is not whether those charges were justified. The chief job of a government is to make the people it governs believe in it, and the fact that those charges were made and were believed in very widely throughout East Pakistan, brought about a very serious situation indeed, and it was that situation combined with the local "fed-upness" which led to the complete overthrow of the Muslim League in East Pakistan at that time. The Muslim League was identified in the minds of the people there with Karachi because the Karachi Government was a Muslim League Government. So they said, "Let's get rid of these people," and they did get rid of them to very considerable purpose. The new Government which came into power under the control of Fazlul Haq was no improvement on its predecessors. The public services began to be very rapidly demoralized. The police were brought to a state when they would take no action in times of disturbances, and when those rather terrible riots broke out in the Adamjee Jute Mills in Narayangunge, the police made no effort whatsoever to deal with the situation adequately, and a very large number of people lost their lives unnecessarily. The Government of Pakistan quite rightly recognized that that state of anarchy could not be allowed to continue. They stepped in and suspended the working of the normal constitution and they sent Major-General Iskander Mirza, who is probably very well-known to many of you, to run East Pakistan, and he ran it to very good purpose. Iskander Mirza is a strong man and he realized that he had gone to East Pakistan not to play politics but to deal with the law and order situation, and there is no doubt that the people of East Pakistan experienced a sense of relief. They felt that chaos was being removed; that a strong hand was what was required, and once again they could begin to move and go about freely, and so the first reaction was one of relief. But I do not believe that that reaction is going to be a long continuing one. People very soon forget the dangers from which they were rescued by a strong hand and remember only the rather unpleasant fact of the strong hand itself. People to-day are forgetting what conditions were like in Dacca and Narayangunge and many other parts of East Pakistan at that time. I have not the least doubt myself that the feeling is beginning to grow that it is time they had

an end of Section 92A or Governor's Rule, and that it is time they got back their constitutional rights.

This presents the Government of Pakistan with a far from easy problem. On the one hand they can try to keep on Section 92A almost indefinitely, in which case many of us think they will be asking for trouble—and East Pakistan is not a very pleasant place to have trouble in. They are a tough people, a people whom it is necessary to lead with you and persuade and not just to compel. So it will not be very easy for the Government in Karachi to continue 92A Rule in Dacca for an indefinite period. On the other hand, if they do not want to continue it they have got to find the right man to run it, and they do not know where to look. Fazlul Haq is not regarded as satisfactory; Nurul Amin, the previous Chief Minister, is out of the question; Suhrawardy, who might have been a possibility, has gone to the Central Cabinet, and there is literally no suitable person to be the Chief Minister of East Pakistan. So the Central Government must either hand over to a Government in East Pakistan badly led, badly controlled, or they run the risk of carrying on Section 92A which is bound, in due course, to arouse popular antagonism and possibly even violence. It is not for me, as a foreigner, to tell the Government of Pakistan what their decision ought to be. I merely want to record the fact that they are faced with an extremely difficult dilemma, to which they alone will have to find the answer.

They have an almost equally difficult problem on their hands in West Pakistan. As you know, some of the provincial governments in West Pakistan have been highly unsatisfactory; in fact I think that it is a masterly understatement to describe certain of them as merely "highly unsatisfactory." At any rate, they have been so unsatisfactory that it began to be realized in the Government of Pakistan that they could not very much longer be left to exist in their present form. So the Government of Pakistan decided that the best way of dealing with the situation, and getting rid of some of the not very reputable politicians who were handling some of these governments, was by abolishing the separate provinces altogether and integrating all West Pakistan into one single state. By doing that not merely would you get rid of some of the not very satisfactory politicians in the individual states, but you would also put East and West Pakistan on something like parity and perhaps make your problem of founding a balanced Centre a little bit easier. So they have embarked on an integration of West Pakistan into a single state which is to come into force comparatively soon. A Council has been set up to examine the details and that Council is now at work. Well, it seems to me that the Pakistan Government have taken on an incredibly difficult problem. It is all right to talk about integrating four countries into a

single state, but when you happen to know that the people of those four countries do not very much like each other, that there is no great love lost between the Sindhi and the Punjabi, and the Punjabi and the Pathan, that they are only really bound together by their common adherence to Pakistan, it is not going to be a very easy problem to integrate them all into one government; to make them be content to accept one rather remote rule from Lahore, or wherever may be the capital of the new integrated state. Apart from the conflicting antagonisms and feelings of the people of the states concerned, there is the administrative problem. It is a vast area to administer as a unitary state, and I have grave doubts myself as to whether it is practicable to administer such a vast diversified area from one centre under one government. I believe it may very well be that, even though there is an integration in name, in reality there will have to be some form of regionalization, otherwise the very mechanics of the thing will not work. Again this is a problem which you and I do not have to answer; it is a problem for the Government of Pakistan and we can leave them to do it. My job is to place on record the difficulty of the problem and to say that I have a good many misgivings in my own mind, much as I sympathize with the purpose behind it, as to whether the integration of West Pakistan is an operation that can really be achieved.

The third problem of Pakistan is that of constructing the Central Government. I am not going to say a great deal about this as that problem is very largely a problem of personalities, and I do not think it would be very edifying or informative, or even very wise if I were to give an account before this audience of all the stresses and strains that exist amongst Cabinet Ministers, potential Cabinet Ministers and politicians of all kinds in Karachi to-day. It is obvious that they do not all like each other very much, and it is also obvious that apart from likes and dislikes some of their temperaments are incompatible. It is not very easy, for example, to imagine Iskander Mirza and Suhrawardy seeing entirely eye to eye on all problems of politics and administration. There is in fact going on, and there will go on for some considerable time, a tussle in Karachi between these different elements. But over and above the personal tussle there is, of course, the problem of the balance between East and West Pakistan. The one thing that the Governor-General cannot, and dare not and will not do is to forget that balance. Pakistan has been brought into difficulties before in the past when that balance has been forgotten, and at all costs it has to be remembered. The Governor-General himself is a very remarkable man. I have known him for a good many years and I have always had the greatest admiration for him. He is now physically broken in health; he speaks with great difficulty; and yet his mind is astonishing clear, and he has proved himself

twice in the last eighteen months capable of taking strong and decisive action when he felt that things were going wrong. I think that the existence of the present Governor-General in Pakistan is nothing short of a godsend, because I see nobody else at the moment who could command the respect of everybody concerned in such a way as to keep these contending factions together and somehow keep the machinery of Government going. Pakistan has had incredibly bad luck with regard to her higher administrators since her inception. The death of the Quaid and the murder of Liaquat Ali Khan were a profound loss to Pakistan, and it is lucky for her that the Governor-General, in spite of all his physical ill health and disabilities, is still a strong man, still able to take the action required. A strong man is badly wanted in Pakistan to-day because there are all these elements of instability, and in the absence of a strong yet wise man they might easily lead to an extremely unhappy situation.

My last word, for I have much overrun my time, must be very briefly about the economic situation of Pakistan. When I spoke last year, Pakistan had recovered from its previous economic crisis. The Finance Minister was speaking in hopeful terms of Pakistan's moves towards self-sufficiency in food and textiles, and he felt that within another year or so Pakistan would be financially out of the woods. It has not worked out like that. In the middle of the year there was another crisis, a balance of payments crisis and general financial crisis, and the restrictions which such a crisis necessarily entails had to be continued, and those restrictions in turn mean a damping down of trade and a retardation of real progress. Why does Pakistan have these recurrent crises? Her economy is fundamentally sound, she can feed herself, she is getting very near self-sufficiency in coarse cotton textiles. Why does she have these recurrent crises? I do not think there is any room for doubt about it; it is because she is letting herself be too ambitious. With great respect in the presence of my very old friend, the High Commissioner, it is because she is making the mistake which so many of us make of thinking that if you wave a magic wand you can change circumstances overnight. She has persuaded herself that developments can go ahead almost as fast as you like, and the result is that during the past few years she has indulged in development schemes beyond her capacity to maintain. As you travel round the country to-day, all over the place you find plant lying idle, factories not working at full power because of something they have not got. You find the Adamjee Jute Mills, for example, at Narayangunge with 2,000 looms installed, another 1,000 ready to be installed, but only working 1,100 looms because they cannot get the power. I could multiply instances from other parts of the country. The natural mistake has been made of trying to go ahead too fast.

Let me give you another illustration from an industry that I have a certain connexion with—the tea industry. The tea industry in Pakistan was told three months ago that it could have no spare parts at all for machinery for the forthcoming year, and yet we are expected by the Pakistan Government to increase our production. We are told we must increase our production. How can you increase production if you cannot get spare parts for machinery? The reason we could not get the spare parts was not because anybody wanted to deny them to us, but because the foreign exchange for them was not available. Far too much of it had been used on over-ambitious capital schemes. I believe, and I say this very sincerely, as one who I think can claim to be a friend of Pakistan, that Pakistan's whole future depends on her beginning to exercise some restraint; on her recognizing that you cannot go ahead beyond a certain speed; that she now needs time to consolidate, and the best advice any outside observer could give to Pakistan would be "Do not embark on fresh schemes in the next year or two; consolidate what you have, use your American aid for that purpose, and give yourself a little breathing space. It is no good setting up industries you cannot maintain. It is no good setting up fresh industries and having your existing industries steadily running down."

Here my last word must be this, that I think there is one danger in Pakistan to-day and that is the danger of people forming an exaggerated idea of what can be done by the American Loan. The American Loan is of value and I personally am extremely glad that it has been taken, but that American Loan is very limited in its amount, it is limited in its scope, and I see signs of a considerable danger of people forming a wholly exaggerated idea as to what you can do with it. People who would have taken a serious view of their financial situation but for that aid are now saying: "We need not bother now we have got American aid; everything is lovely in the garden." But everything will not be lovely in the garden unless Pakistan will exercise the self-restraint to which I have referred, and will say to herself the time has come to call a halt, to consolidate what she has got, to make her new industries work properly, and when, and only when that is done, it will be time to think of fresh schemes.

I have spoken very frankly about India and Pakistan, and I have felt at liberty to speak frankly because I think everybody in this room knows that I do regard myself as a real and genuine and lifelong friend of both countries, and it is only when one is a friend that one can afford to speak frankly about matters of this kind.

Mr. STEWART: Does the speaker think there is to be a chance of nationalization of existing industries or only in the case of new projects?

Which industries are likely to come under the embargo of the Managing Agency Act?

Sir CYRIL JONES: Sir Percival has told us of the impatience in India at the slow rate of development there over the past seven years. He has also told us of the untoward results in Pakistan of an over-rapid rate of development in that country. What are the chances of India, and of Mr. Nehru in particular, taking an object lesson from what has happened at their own door?

Mr. T. K. KOCHUTHOMMEN: While talking about the growth and progress of the Congress Party the Speaker referred to the fact that the Congress Party is slipping out of the hands of the aristocracy and intelligentsia and coming under the control of, in his own language, the small man. Does he not think it is after all the law of growth and evolution that power in the Congress Party should pass from the aristocracy to the ordinary man in the street? After all, the Congress Party should and ought to be a truly representative party, representing the interests of not only the aristocracy and intelligentsia, but of the teeming millions of India who are, unfortunately, still not safe from starvation. I agree that the Congress Party is becoming more democratic.

Sir PERCIVAL GRIFFITHS: Mr. Stewart's first question was with regard to nationalization of existing industries. He wanted to know whether I thought in fact that nationalization would be extended to existing industries or whether the public sector would be regarded as suitable only for new projects. All the indications I could get when I was in India this time were that there is no real expectation of nationalization of existing industries. I do not say that the will to nationalize industries might not be there in some sections of certain political parties, but whatever the will may be the money is not there to do it. India is going to be very hard put to it to raise funds for its own national plan. Every penny that she can raise herself or borrow from abroad is already earmarked, and earmarked once or twice over, for projects of a new kind falling under that plan. It has been recognized, I think, by all sections in the Government of India to-day that to spend money on nationalization of existing industries instead of getting ahead with new industries would merely be retarding India's progress. I know that from time to time one gets rather sensational statements made by Ministers and others which seem to suggest that the State will take over everything in a very short time. I do not think those statements have any real substance behind them, and if my reading of the feeling in Delhi is correct, their

intention is to go ahead in the public sector as fast as they can with new projects, but to leave existing business to look after itself.

Mr. Stewart's second question related to the possible selection of industries for an embargo with regard to their Managing Agencies, from April 1960 onwards, and he asked if I could give any idea as to what particular industries were selected. I think the best answer I can give to this question is this, that when these proposals were originally being discussed there was an idea that they would name the particular industries in the Bill itself, and the industries then suggested, I think, were tea, cotton, jute, and coal. The idea of including those specific industries in the Bill itself was discarded, and Government are now left with the power to specify which industries will be picked out. I think that when they come to think it out in detail, they would very rapidly find that some of the four industries that I have mentioned were particularly unsuitable for the kind of operation they have in mind. Take the tea industry, for example, I have no hesitation at all in saying that in 1952 the tea industry would, as regards large sections of it, have gone out of business had there been no managing agencies, and I think it is fairly well recognized that that is an industry in which, above all others, you have got to have something like this system. You have scattered tea gardens all over the place; are you to have an expert high-powered engineer for every 500-acres garden, working somewhere by itself? There has to be some common agency for economizing *expertise* and reducing their problems to a degree of uniformity. I think that is recognized, and I think that if they were making the list up again to-day it is quite likely that they would drop out the tea industry. So all I can say is, that those were the four industries that were mentioned. I think in regard to each one of them they will find serious practical difficulties when they come to try and pick it out as a suitable industry for abolishing the managing agency system.

The next question is from my Indian friend who, very nicely and from his point of view quite rightly, took me to task for talking about the "small man," and he asked me whether it was not right and a proper process of democratic evolution for power to pass from the older more substantial people into the hands of the small men in the Congress Party. That is not a very easy question to answer because it entails one's own particular political faith. I would tell him that, if he wants my own personal view, I get no pleasure at all out of contemplating the passing of power from the hands of educated, responsible, experienced people with years of business knowledge behind them, into the hands of people, who, however worthy—and they are worthy—know nothing. That may be democratic, but it is not a process that I personally regard with a great deal of satisfaction. However, what I am concerned to do is not

so much to express satisfaction or dissatisfaction as to report the process, and my object was to report the process that power is in fact shifting into the hands of the small man. Some may think it is a good thing, others a bad thing, I myself think that, in the present stage of India's economic development, on the whole it would be a bad thing, but I recognize the right of everybody else to hold different opinions.

Sir Cyril Jones drew certain comparisons between India and Pakistan and asked whether I thought there was the chance of India learning from the mistakes that had been made in Pakistan. I do not think there is very much chance of that happening. As far as most people are concerned it is amazing how little people in one country know about what is going on with their next door neighbour. I find that when I go from India to Pakistan and Pakistan to India one of the most useful functions I can perform is to tell people what is going on in the country next door. I found my old friends very anxious to know what is really happening in India, what is really happening in Pakistan, and each one asks the same kind of questions. The Pakistani says "Are things as bad in India as they sound?" and the Indian says "Are things as bad in Pakistan as they sound?" They know remarkably little about what is going on in the adjacent country, and I do not think, therefore, there is very much chance of any of them learning from the experience of the other. That does not apply at official level. The officials meet and interchange ideas, and as you know, when you get an Indian official and a Pakistani official together you nearly always get an agreement pretty quickly. But the officials to-day, alas, do not make policy and when it comes to the policy shapers I think there is very little real contact, very little real understanding in either country of what is going on in the other country. Therefore I am not very hopeful that India will learn from the experiences of Pakistan.

SIR GEORGE CUNNINGHAM: We have all listened with enthralment to the most fascinating and acute description Sir Percival Griffiths has given of what he has seen on his last visit to India and Pakistan. Since the two countries were partitioned, there has been no one, I think, who has taken so much pains as Sir Percival has to keep himself acquainted at first hand with what is going on there, and it is fortunate for audiences as we are to-night to hear the results of his labours and his tours. He has been critical in some ways of certain things which have taken place in the last year or two in both countries. When he is critical we know, as he indeed finished by saying to-night, that he has been critical not just for the sake of criticism but from his real and abiding friendship and affection for the two countries, and the knowledge that it is only by the fair and thinking

criticism of friends that the possible weaknesses of those two countries may be eliminated. My own experience has been mostly in the North-West Frontier Province, and my knowledge particularly is of Pakistan. We are all going to watch in these next few months with the most intense interest the result of the new arrangements which Sir Percival has described this evening in the integration of West Pakistan and the formation of a unitary state combining both East and West Pakistan. My own belief is that, knowing the sound commonsense of the Punjabi and the Pathan, the system will be found workable and will be made a success. They have got some excellent men now at the Centre, among whom is a former officer of mine, Major-General Iskander Mirza. Dr. Khan Sahib is also a man for whom I have the greatest friendship and the most intense admiration, and I am quite certain he is going to be a great source of strength to the Central Government in Karachi.

I offer Sir Percival Griffiths a hearty vote of thanks on behalf of this audience and if you have learnt as much this evening as I have, you will all go away a very well-instructed audience.

Reception to Mrs. Pandit

THE EAST INDIA ASSOCIATION gave a joint Reception with the Over-Seas League at Over-Seas House on Monday, 24th January, 1955, to welcome Mrs. VIJAYA LAKSHMI PANDIT as the new High Commissioner for India. Doreen, Lady BRABOURNE, representing the Over-Seas League, and Lord HAILEY, President of the East India Association, received Mrs. Pandit.

After tea Lord Hailey said that, although this was in a sense an informal occasion, he was sure the members of the East India Association and the Over-Seas League would like him to extend a most formal welcome to Mrs. Pandit as the new High Commissioner for India. Referring to the distinguished position Mrs. Pandit had occupied in the diplomatic world, and lately also in the United Nations, he said that all those who had spent their lives in service in India must feel a sense of gratification at the position which Indians were now winning for themselves in world affairs. He was not going to attempt to assess the extent to which the work of the British in India had contributed to make it possible for Indians themselves.

to win this position. That was a question on which the British, the Indians and the future historians of world affairs might all quite well have different views. It was better to fall back on the unquestionable axiom, which was older than India herself, that one's best friend is he who most truly shares one's sorrows and one's joys. India, said Lord Hailey, must be very gratified with the position which her sons and daughters were winning in the world; those who had served India and had been her friends must be the first to share that pleasure with her.

Lord Hailey added that to him personally, it was a special pleasure to welcome Mrs. Pandit to-day, for she was the daughter of a great Indian, whom he himself had known well in the past, and had greatly respected. Pandit Motilal Nehru was, at one stage of his life, a critic and indeed an opponent of Government policy as represented in the Legislative Assembly. But there was no one on the Government side who did not appreciate his sincerity, his real sense of leadership, his good faith, and the sacrifices he had made for his own cause. Those who had to support the Government case had differences with him; but differences never became animosity or lessened their great regard for him. He referred to this to-day because he thought that the facts were symbolic. Times had changed; their political relations with India had changed; but there were some things in their relations with India which were of inestimable value to them both, and which he hoped would always endure as a bond between them.

Mrs. PANDIT: My whole life seems to be one series of apologies for various things I have not been able to do, but I assure you I am genuinely ashamed of the inconvenience that my unexpected illness caused to so many friends and to so many organizations in this country, and I hope you will forgive me.

Lord Hailey, I am particularly touched by the manner in which you have welcomed me as I believe so deeply in the things to which you drew attention just now. It was good to hear you speak about my father because, apart from whatever my feelings for him as a daughter may have been, he was, even in my lifetime, a political leader, my political leader; for I had already begun to work on the fringe of politics before he died. I believe it was due to him, and to many like him, that the bitterness that might otherwise have entered the struggle in India was not allowed to develop. Ultimately, of course, it was Mahatma Gandhi who was responsible for keeping that bitterness at the lowest possible ebb, but it was men like my father, Sir Tej Bahadur Sapru and others who by the way they functioned, even in opposition, received from their opponents the highest respect and regard. Now that India is independent I think

it is good to think of them and of what they did to keep our friendship, as it should have been, untarnished.

Lord Hailey has also mentioned the contribution of many Englishmen who were with us in the old days, and I do believe they made a valuable contribution and in many ways were a great help in putting us on the road that we subsequently followed of parliamentary democracy. It was undoubtedly the example of this country that inspired us to make that our own objective after we had gained independence. It is true we fought the system the British imposed on us with all the strength and power we had, and in a manner that had been previously untried in history. But India's independence brought us something very valuable and, although you may have lost India as a part of the Empire, you have gained something which the Empire could never have given to you and that is the friendship of 370 million people who are pledged to the same way of life as the one that you follow.

We live in an age in which day-to-day changes are so rapid that it is impossible to know what is in store for us and, therefore, more than ever, men and women of goodwill think about peace and the way in which they can maintain that peace. I believe it is a very special responsibility cast upon those English men and women who have served India in the past, and who to-day as friends of India are welcoming me here, to see that my mission in this country is a success, because my mission in this country is something more than merely the interpretation of the political aims of India. If it had been just that perhaps it would not have interested me very much. But India's mission, as I interpret it, is to build up that kind of a climate here and in other countries of the world in which peace can grow and in which we can really nurture peace. I feel, without being unduly complimentary to anybody, that perhaps the Commonwealth, with its past background and traditions, can help in creating this climate; and I think it is important that people who have worked in and know India, probably even better than I do who was merely born there, should try to interpret the deeper things for which India stands. It is not enough to be able to interpret a foreign policy; foreign policies are after all evolved, there is nothing final about them, they grow as the result of one's needs and commitments. But what must be interpreted is the soul of the people, their roots, traditions and historical motivations, and you who know India so well must help me to do just this in your country, and I am sure I shall have your assistance whenever it is needed. I would like to regard the Associations represented here to-day as a kind of bridge over which all those who are in doubt can cross, a bridge between friendly countries. In these days of technical advancement and scientific "know how" the building of bridges is very important whether they be of steel

or those human bridges which are built through the faith and understanding of people of goodwill. I am confident that the United Kingdom will provide such a bridge.

Having been associated with the United Nations since its inception up to last year, I have come to believe that there is really nothing that cannot be solved provided people get together and give themselves a chance. The United Nations may not have been able to do anything very spectacular, but the fact that in the few years of its existence it has been able to preserve peace—even though an uneasy one—in the world is something gained. Then there has been the truce in Korea to its credit, and even more recently still we have had the cease-fire in Indo-China. Though this was actually negotiated outside the United Nations, it was nevertheless the result of a United Nations approach. It is possible to say with some certainty that the United Nations has proved that when people sit down together there are greater chances of understanding than of conflict. The important thing is to have patience and develop a tolerant attitude to views divergent to one's own. That again can only come by getting together and being together, and so my Government has always sponsored the idea of people coming together at all levels to discuss situations, whether they be small internal situations or the larger international problems which have sometimes threatened to engulf us. I also believe this, which is part of my experience of the United Nations, that in this age of open diplomacy it is everybody's business to think about international problems. It does not only lie with the politicians and statesmen but, to the extent that each one of us understands and tries to use our influence, to that extent the right will prevail. It is all too easy to blame some mistake on to statesmen or politicians of a nation and say everything is going wrong here, but to-day the responsibility for peace rests with the peoples of the world, and if the peoples of the world are organized and united in their demand for peace, if they have the courage and persistence to work to create a climate in which peace can thrive, then peace will come. That is the responsibility you and I have and must discharge, because there is no magic formula yet evolved, in the hands of any nation, that can bring about the state of conditions in this world which we all desire. The magic formula, if any, is within ourselves, and it is for us to find and use it. I am very certain those of us who live in circumstances and under governments where our voices carry weight can, and should, use that power to curb the impatience that is so natural when things we want do not come about immediately. If we can do that I think the state of affairs will have been reached in human thinking when, before taking any action, the statesmen of the world will have to wait for public opinion. That will be the triumph of democracy.

not the casting of a vote for some particular person on a given day once every five years, which is what so many of us are apt to do. The real essence of democracy lies in the people governing, and they can only govern if they use the strength that the vote gives them, by being united and knowing what they want. I have deep faith in the power of the Commonwealth and in humanity. Human beings are very much the same everywhere, but circumstances mould them differently, and if those of us who have the opportunity can use it to influence others, then we can go a long way on the road to a stable peace and the kind of conditions in the world which we all desire.

I look forward to many opportunities of meeting friends here, individually and collectively, and I would like to say that I shall always be at the service of any one who seeks my assistance. Equally I hope you will let me call on you if I am in need of any help, and that together we may, both inside and outside these Associations, be able to show people the greatness of this new link that has been forged between India and this country; and the strength that lies in responsibilities voluntarily accepted and discharged without a feeling of pressure from any group or individual. I thank you for inviting me here to-day and for giving me this opportunity of meeting all of you and I wish these Associations strength and power.

Sir JOHN WOODHEAD: It is my privilege and honour to thank Mrs. Pandit for being with us this afternoon. May I, Sir, endorse what you said with regard to her recovery from her recent illness. When you were here, I think it was last year, Mrs. Pandit, I made a prophecy. You were then still with the United Nations, and I said that I expected, or rather hinted that you would very probably be with us again, and that we should then take the opportunity of welcoming you to your new post as High Commissioner for India in London. We are very grateful to you for speaking to us on the questions you have dealt with. You are extremely busy, and must be extremely busy at the present moment particularly in view of the coming Commonwealth Conference, and so we are very grateful and appreciate your kindness in being with us this afternoon.

Chandigarh and Planning Development in India

SIR GEORGE BIRDWOOD MEMORIAL LECTURE

"CHANDIGARH and Planning Development in India" was the subject of the Sir George Birdwood Memorial Lecture delivered by Mr. E. MAXWELL FRY, B Arch., FRIBA, and Miss JANE B. DREW, FRIBA, to a joint meeting of the Commonwealth Section of the Royal Society of Arts and the East India Association, at the Royal Society of Arts on Thursday, 3rd February, 1955. Her Excellency Mrs. PANDIT, High Commissioner for India, occupied the Chair.

Mr. E. MAXWELL FRY, dealing with "The Plan," said: The building of Chandigarh is a part, and a relatively small one, of the Five Year Plan that was inaugurated in 1951, and can best be appreciated against the story of disaster and misfortune of the opening years of Indian independence to which the Five Year Plan was the courageous and effective reply.

It is hard to believe that the decision to build a new capital for the truncated State of Punjab was taken so soon after the disastrous partition that separates Pakistan from India in a welter of bloodshed, leaving refugees innumerable on both sides, great losses of property, dislocation and bitterness. Yet in 1951 when we were first approached by the Punjab Government there was already a master plan prepared by Mr. Albert Mayer of New York, and the essential structure of a project incorporated an estimate that formed the basis of finance and was never materially departed from.

The secret is that the Punjabis and the Sikhs are as tough and cocky a race of people as anywhere on the earth—healthy, robust, obstinate and cheerful. They failed to respond to the normal idea of what a refugee should be, took Delhi by storm, and no sooner established themselves as a government in Simla than they fixed a date for leaving it in favour of the plains, and immediately set about attaining their target.

By the spring of 1952 a team of architects, with Le Corbusier as Architectural Adviser and including M. Pierre Jeanneret, his one-time partner and cousin and Jane Drew, my life-time partner and wife, was appointed, and in a fateful meeting in Chandigarh Rest House, on the Delhi-Simla road, hammered out with Mr. Albert Mayer a final plan responding to Corbusier's long held ideas on city planning.

The key to modern city planning lies in definition of function. So long as movement was largely pedestrian and wheeled traffic slow-moving,

separation of one from another form of traffic was unnecessary; but as the speed of wheeled traffic increased, which it did as soon as roads were properly installed and long before the event of the motor car, the separation of foot traffic from wheeled by the construction of pavements was dictated in the interests of pedestrian safety and also to allow the full exercise of horse-drawn vehicular mobility.

Industrialization, by accelerating the speed of communication, concentrated people in cities built largely in accordance with pre-industrial ideas, so that when the motor car arrived, capable of ten times the speed of horse-drawn vehicles, it spread death and havoc among all but the most grandiosely planned cities: while it added still further to the mounting curve of concentration, until at focal points in every capital city in the world traffic ground to a standstill, and deadlocks supervened.

FAST AND SLOW TRAFFIC

Release came only by separating fast from slow-moving traffic, as New York, at colossal expense, clearly demonstrated; and Le Corbusier selecting from the New World the two dominant features of the skyscrapers and the elevated roadway, propounded in his *Ville Radieuse* a solution that met congestion of building by reconcentrating it in high story towers, leaving a great deal of the ground free for pedestrian use; and safeguarding this again by carrying motor traffic on elevated roads serving the towers at high level, and touching ground at points dictated by functional need.

These proposals, which he was never himself to carry out, contain the seeds of successful urbanism wherever concentration is heavy; but at Chandigarh this could not be seen to exist, and could not therefore be backed by sufficient finance: the solution would have to be two-dimensional, and for a one and two-story town.

The Chandigarh master plan is nevertheless a work of definition. Its rigid grid of fast-moving traffic roads intersect at half mile intervals across, and three quarter mile intervals up the plan; and it is the key to the planning system that these roads are secured to fast-moving traffic by being planned without footpaths, and with no frontal development whatsoever: they are nearly as much safeguarded to fast-moving motor traffic as a railway line is for trains.

The roads define the boundaries of sectors of about 240 acres in area and containing up to 15,000 people, and the segregation of the fast-moving boundary roads is secured by planning the sectors internally, and entering them at four points only.

Each sector is bisected along its minor access by a road, open to all forms of traffic, which may be called the High Street or Bazaar Street.

This road, though it passes from sector to sector across the plan, is indirect and staggered at its junction with the fast-moving grid, offering little opportunity for speed, because its function is to carry on its shady side the shops, markets, local offices, cinemas, in fact, the day-to-day shopping and business life of the community, and as such it satisfies this distinct element in our composition.

Along the other or major axis of the sector runs, not a road, but a wide band of open space dedicated to the other side of life: to recreation and relaxation, to youth in terms of schools and playing fields, and to age under shady trees, in contemplation; and it, like the Bazaar Street, continues across the plan in the direction of the Himalayas, which it has always in view.

The sector, thus divided, has four quarters in which housing is planned, served by a road that touches the Bazaar Street at two points only, and connected at top and bottom with the fast-moving grid.

SCHOOLS AND PLAYING FIELDS

Thus, every household is in easy and safe distance of both the open space with its schools and playing fields, and with business and shopping, and because housing is planned to be served by the internal roads of the sector the whole concentration is inwards, the interest lies *within* the sector, and the temptation to regard the outer roads as anything but a segregated route for fast-moving public and private transport is lowered.

The system could be endangered by the establishment of unauthorized paths across the fast-moving grid, but these are preventable and punishable, and are a minor nuisance on roads that do not otherwise create traffic by linear development. In the experimental Sector 22 we have actually built high walls cutting off access from the sector at any but defined bus stops.

You have therefore a grid of straight roads, interrupted at intervals of three-eighths and a half a mile, which are long intervals by any standard, very well suited to the operation of public transport, and with roundabouts at the inter-sections, safe and easy to police. You have, more faintly drawn as it were, a corresponding grid of cycle movement, either along the Bazaar Streets in either direction, or along the bands of open space and the city park, in the other direction, independent of the fast-moving traffic which when it increases in volume it will pass under or over.

This is the matrix of the plan laid upon land falling at a level slope of 1 in 100, which is ideal for drainage, and shedding off towards two dry river beds five miles apart. The land upon which Chandigarh is built is nearly flat, but immediately to the north-east, at the head of the plan, it

breaks into low hills behind which the Himalayas rise immediately to 5,000 feet stretching away indefinitely upon either hand, with glimpses of snow caps in winter a magnificent and ever-changing backcloth to this remarkable venture.

The grid matrix is differentiated and given the form of a city by the accentuation of two major roads; one coming in from the station and going to the university; the other, at right angles, leading to and from the capitol at the head of the plan. These two roads are open to all forms of traffic in separated lanes, and their frontages are fully developed. The capitol group of government buildings is placed at the head of the plan silhouetted against the Himalayas and at the crossing of the two main distributive all-purpose roads is placed the city centre, with business and city administration.

A CITY PARK

The accident of a minor river bed passing down the length of the plan is turned into a city park like a magnified version of the band of open space in the sectors, and this with its extension to the left towards the university, and with the capitol approach road directly associated with it, accentuates the plan form and humanizes, without impairing, the strict efficiency of the grid.

These features define a satisfactory anatomy that is completed by an industrial area adjoining the river bed on the north-east which is later to be reclaimed by damming the river and forming a square mile of water for irrigation purposes.

It is an anatomy that, thanks to the Himalayas which close everywhere the northward view, will allow of easy identification at any point; but it will be further accentuated by tree planting, heavily underlining the principal arteries, giving over-arching shade to the fast-moving traffic roads and by variety of shape and colour masking the main lines across the plan in the bands of sectors. Thus, the difficulty of knowing in what radiating avenue of Delhi you are, and in what direction you are moving, will at Chandigarh be obviated; and on no road will motorists be driving into the setting sun.

A city is mainly houses, but is often remembered for some one building, as Chandigarh is likely to be remembered for the group of buildings of the capitol upon which Le Corbusier had lavished his greatest care. Of these, the High Court is completed and the Secretariat, of which Mr. Nehru laid the foundation stone on 7th November, 1953, is under way.

This group of buildings is a subtle asymmetrical arrangement within a flat moghul-like park of lawn, lagoon and sculpture, backed by the first

ranges of the Himalayas. On the left is a nine-story Secretariat of great length, associated with the Assembly Building, the high open porch of which looks over to the High Court away on the right, with the Governor's residence set back in the depth.

In the High Court Corbusier's response to climatic conditions takes the form of a single high-arched roof, a parasol indeed, under which the building sits, protected further on the sun side by finely adjusted vertical and horizontal sun-breakers. It is a bold conception embodied in a design of great nobility and fine proportions. There is nothing mean or trivial about it. It will stand comparison with the great hills before which it stands.

THE CITY CENTRE

The development of a city centre in the early years of the construction of the city itself is an act of faith. Lacking the pressure of human affairs which in a grown city are taken for granted, the architect is thrown more nearly on his own resources of intellect and courage than in any other act.

Corbusier's plan for the city centre of Chandigarh is made in full confidence of pressures ultimately to come, and continues the theme of separate functions for traffic and pedestrians by making the heart of it a great pedestrian piazza or *chowk*, as Indians would say; a cross enlarged into a large square at the centre and lined with shops and offices fitted into standard elements that allow of flexibility of needs and expression.

Wheeled traffic, and parking space for it, circulates in rear of it, and crosses from one quarter to another over high level roads passing through the buildings and over the pedestrian space; and development, which has started from the central square, containing the City Hall and the Post Office, will join the local High Street which bisects this sector as in others. There is no immediate attempt to develop the outer frontage of the wide main avenues that bound the sector, and thus from the beginning the city has a heart with room for it to expand in measure with its growth.

The operation of the project is governed by an estimate which covers the initial project for 150,000 people on 8,519 acres of land, and makes possible a further extension to half a million people. The project contemplates a total expenditure of £12,886,385 during its first phase, and of this more than half, £6,617,213, relates to the cost of development and of civic amenities: while the balance represents the cost of government building and water supply, with recoupable items bringing the gross expenditure to £13,417,154. Development costs are to be recovered from the sale of plots to the public, and taking into account rents paid

for Government buildings in the first phase, the net expenditure works out at £6,241,461.

The cost at which land is sold to the public includes everything covered by the term development costs—land acquisition, roads and bridges, sewerage and drainage, electricity, dams across the river, landscaping, railway facilities, establishment charges, and a large item of civic works. This last includes as many as 35 educational and eight medical institutions in addition to six community centres, six swimming pools, a stadium, museum and art school, library, town hall, and a number of administrative offices; and within the 35 educational buildings are large colleges for men and women, four high schools and a residential school, 11 junior secondary schools, 15 nursery schools, and a polytechnic and college of physical education.

COST OF LAND

The cost of land, loaded by everything that could be held to provide the social amenities of a modern welfare state, worked out at a value of 18s. a square yard for small domestic plots, grading down to 6s. 7d. a square yard for the largest; and at these prices were sold, by allotment with preference for displaced persons, to a waiting list far exceeding the number of plots that the overworked architects and town planners could make available at any one time. Similarly the industrial and commercial plots offered by public auction were eagerly taken up at prices nearly embarrassingly above the reserves set upon them in the estimate.

Thus the financing of nearly half of the total expenditure was advanced by the payment of the first of four annual instalments of 25 per cent of the plot values, in return for which purchasers could expect such amenities as had never before been offered to Indian citizens.

Conversely it was the architects' task so to plan the city in detail as to realize the full value of these sales, and for engineers and architects alike to keep within the already pruned estimates upon which value depended, Chandigarh being what might be called the "cash and carry" plan, with loans from central and state government but very little direct subsidy.

The work continues. When I left in April, 1953 we had, from an empty site and a blank paper, created the beginning of a city by housing over 20,000 people in permanent houses served by a waterborn sewage system, roads and electricity, two schools, a health centre and nursery and complete college of engineering was working, an hotel open to receive guests, and the government had moved from its cramped quarters in Simla to cramped quarters in Chandigarh, but into permanent buildings of the city,

its members housed in permanent houses. And this month the judges will be in their High Court and little will remain of the refugee period in the hills.

Such a record is a credit to the New India and could never have been achieved without enthusiasm and determination that ran through every part of the undertaking, and sustained it against the difficulties that beset all such ventures, as well as those inherent in so old fashioned a system as the Indian Public Works Department which, if it can be overhauled and made fit for an independent people, will release a fund of energy and talent that India knows what to do with.

Mr. P. L. Varma, the long sighted and broad-minded chief engineer, and Mr. P. N. Thapar, ICS, the beloved taskmaster and first administrator, are the prime movers of Chandigarh and nearly beyond praise: it has been a pleasure and an honour to work with them.

To the engineers and to the architects and town planners of our staff, not forgetting the secretarial staff and those in various capacities below, we owe a debt of gratitude for their affectionate collaboration that turned three years' hard labour into an experience that we will treasure for the rest of our lives.

HOUSING

Miss JANE B. DREW, dealing with "Housing," said: In doing the housing at Chandigarh we were most conscious that we were designing at a time of great social upheaval and believing as we do that art has a most important role to play and that our life is governed by the images of our mind, whether inwardly or outwardly conceived, and that the outward images affect the inner and *vice versa*, we attempted, and our work is the mute criterion by which this attempt may be judged, to make a statement which would be acceptable.

I would stress that these images, although they are in a sense those of the architects concerned, were at the time of creation influenced by the Indian climate, both physical and spiritual, and that the architects and engineers who worked with us and all those whom Mr. Fry has mentioned actively helped us.

Housing at Chandigarh is markedly different from a prepartition conception of suitable tropical housing. The houses are smaller, the room heights lower, the walls thinner, and the kitchens better equipped. The methods of cooling are more scientific but the greatest difference between these houses and prepartition houses, say at Delhi, is the image they present and their being thought of as homes for a new way of life. If the income is too low for this standard of life to be privately provided

then the housing is so grouped as to make it convenient for this to be done communally. Thus public open spaces for a variety of purposes and buildings such as nursery schools, community centres, swimming baths and health centres, are designed together with the lower grade housing.

The artistic quality arises partly from the broad way in which streets and housing groups have been treated as entities, the individual unit, be it house, flat or shop, being subordinate to the whole design. The difference in the character of the designs of the three architects, Mr. Fry, myself and Mr. Jeanneret is interesting and a constant matter of discussion in the town. Mr. Jeanneret's work was a mixture of ruthless logic and a lively element of play. To give an example his windows, which sometimes present a free pattern on the façade, are often only surrounded on two sides—those needing climatic protection. He has on the other hand adhered strictly to Le Corbusier's system of modular proportions which he believes give a unity and order to his designs. He produced very ingenious brick jalli work designs, for instance, which allowed air to pass but still gave privacy. His work was somewhat criticized as being difficult to build and maintain. He had a great number of small windows in some of his first houses which housewives complained were difficult to clean. I find his vigorous, excited rhythms improve with acquaintance and there is no doubt of his quality as an architect. Maxwell Fry's development can be best examined by a chronological appreciation of his work. I remember a friend saying when we were deciding whether or not to go to India, "You will learn more from Corbusier than he from you."

I think this has happened, and Fry's later houses show an æsthetic sense less influenced by the urban English Georgian background which makes his Indian architecture the beginning of a new evolution in his work with very solid geometry combined with lively vibrating rhythms and a more biting sculptural effect.

GOVERNMENT EMPLOYEES

We had the advantage of planning for an enlightened government anxious to provide its people with the highest standard of life possible within their economy. Our original programme was to house thirteen categories of government employees graded by salary; from a peon's house costing £244 to a chief minister's house costing approximately £7,700. This programme was later extended to include lower salary grades—sweeper and dhobi (a washerman) and to self-aid refugee shop owners. Our minimum type of house (of which 600 were in course of

construction when I left Chandigarh) cost R.2000, or £154. It included two rooms, verandah, kitchen, w.c., wash place and a small enclosed courtyard, for since the Chandigarh climate varies from an intensely hot summer to a cold winter a great deal of life is passed out of doors and sleeping, eating and sitting are more often carried out in the compound or on the roof than indoors, the bed being a sort of shuttlecock: "take up thy bed and walk" has real meaning in India.

The smaller houses were designed in compact social groups of about 150 houses, a figure we chose as being the usual size of Punjabi villages and economy was effected by shared services and walls and virtually pedestrian access within the precinctual area.

We discussed our houses with their prospective inhabitants, in some cases building pilot models, and it was soon clear that, for the very poor, space, privacy and security were the essentials. They were very insistent in their plea for two rooms, however, small, saying that this would enable them to live a decent family life and that they would look after their houses, a fact which was noticeably true; indeed, they looked after them better than the higher paid clerks in the grades above them. We found it difficult to achieve a house consisting of two rooms, w.c., wash place and a walled compound on the money allowed, and had to learn what to do without; and since timber cost more than cement and cement more than brick and all non-local materials were expensive, we built our cheapest housing almost entirely of brick for them. We cut down on cement and timber work, omitting internal connecting doors, ventilating and lighting largely by brick jalli work. We discovered how whitewash on brickwork is a cheap, clean and beautiful surface, and how the additional smoothness of plaster can be dispensed with as an amenity when costs have to be cut. We found that the greatest difference in design as we went up the scale from sweeper to chief minister was in finish and larger rooms, although the number of rooms naturally increased somewhat, and servants' quarters and garages were added.

In our cheaper housing we planned public and private services and structure together; street lights and their cables, for example, being carried by the houses themselves. We used water spouts rather than down pipes. We had, of course, the great advantage of framing our own byelaws.

THE MARKET SQUARE

We designed not only government housing but as needs became pressing and demands clearer various kinds of shop cum flats. The first big enclosure, a market square, consisted of shops in front and two floors of flats above, approached by rear access. These were built, but very slowly,

by the Government and it was decided as the demands grew to provide instead shopping sites for sale with the rider that the occupants must build shop and flat, or booth, to standard plans and specifications. The shop and two-roomed flat, kitchen, washroom, store and lavatory costing £1,200 and an incentive in price reduction was given for quick building. These sites sold for high prices and there came considerable consumer reaction to the architect. I remember one old man who sat patiently for a day outside my office to implore me to make certain minor variations for his son's premises. Our policy was to listen to criticism and where possible, without prejudice to the whole design to take note of it. (We designed improved models of most of our houses). The public built fast, but the difficulty of controlling their construction was great and the cost of supervising the piece-meal nature of the operations and the diversity of quality of contractors was against it, also the Punjabi Bunias (or shop-keepers') disorderly powers of encroachment—tops of verandahs became repositories for boxes; our estate office was very hard put to it to maintain order! For the very poor we designed State-subsidized shop *cum* houses consisting of small shop and store, an internal courtyard and a two-roomed dwelling with a kitchen, washplace and water closet, with the possibility of future additions behind orderly façades when finances permitted, the State lending £400. We had with us always the knowledge that round the town was a press of poor and homeless people, thousands of them, migrant labour and their camp followers, traders of all kinds, a threat of slum and social disorder despite our five-mile perimeter control act. In fact, the realization that any form of permanent structure with water laid on was for the majority an improvement on existing conditions made it difficult to justify the high standards of our two-roomed minimum house. Yet we felt instinctively that in raising the standards of these government employees' houses and lowering those of the higher income categories the government was right; and equally we felt that this movement had gone far enough.

LOWER CLASS HOUSES

Unlike Delhi or Mayfair the lower class houses were not designed with the rich but were approached from the point of view of the group. Being the home of the whole many items were "extra" to the individual house: the central green, the covered entrance way to the "village group" as we called it, and the detailing of corner houses and connexions. We also found that although climatically we could decide on an ideal aspect for houses with the right compromise between the needs for ventilation and shade, social requirements meant modifications on this, so that within

a single group of houses there were many very slight divergencies required from the basic design.

The interiors of our houses were largely a series of rooms which, despite our westernized labelling of our plans, as bedroom, living room, dining space, were all, at any rate in the lower category houses, used as bedrooms at night during those times of the year when indoor sleeping was preferred, the marriage and extended families customs at times filling the houses with many guests and it was recognized that our zoning laws of single family houses were, in an Indian setting, difficult to interpret because of the extended nature of the family. Interior decoration in the village is common and mud moulding and painting usual but the permanent wall seemed to defeat these instincts. It must be remembered that the houses were owner occupied, not owned, a fact which there, as here, has an adverse effect on the pleasure and pride taken in the upkeep of house and garden.

We tended as time went on and public reaction became known to provide more fittings with the houses. The kitchens were insect-proofed and fitted with food cupboards, shelving and fuel sheds. High level cooking was popular and, although the electricity was out of the question for cooking at present the incorporation of kitchens within the house was popular and there is no doubt that the tendency as elsewhere in the world is towards occupier run servantless housing.

We were criticized for not having paid enough attention in our first designs to the needs of security—barred ground floor windows and small windows on public fronts were required, and a place where things could be safely locked up was a great need; much of an Indian's wealth being in the form of jewellery.

We used our own houses at Chandigarh as experimental places to see how from locally available materials we could cheaply furnish. We built brick seats, covering them with a thin screed of cement and designed bamboo and strong chairs and tables. Our architectural staff made many a useful piece of furniture from grocer's boxes, baskets and builder's waste materials. We, and particularly Mr. Jeanneret and Mrs. Chowdarhy, an Indian member of our staff, designed furniture; for example, chairs where the open cane seat was suspended from the arms, an individualized version of the great Indian swinging divan, remembering how, in the dry heat, air movement helps to cool the body.

We built in cupboards for clothes storage but discovered how simple are the clothing needs of a nation not guided by fashion and one day, opening the built-in wardrobe in a Minister's house and finding it contained but two cloths, it led me to think deeply about the clutter and complication of our western way of life.

From our future tenants we learned illuminating facts about traditional ways of living and in our earliest types of houses it was impressed upon us that we must, for example, separate sweepers' access to bathrooms and design for the extra privacy of the women of the house. A look at an early Type 9 house will illustrate these points, and so money went into passage ways and privacy-making grilles. The Indian customs of working low and of using squatting type latrines were impressed upon us, but as time went on we realized that customs were changing rapidly and that when clients were offered a traditional or non-traditional solution convenience and not custom, tradition or taboo most often decided the preference. We had actually considerable difficulty in discovering which customs would change rapidly and which would persist, a difficulty accentuated by the fact that income differences did not reflect outlook, the ministers who occupied our most expensive houses dressing and living rather traditionally, whereas the secretaries occupying lower-grade houses lived almost like westerners.

SIX CLIMATES

Chandigarh has about six climates; cold, dust, rain, wind, wet or dry heat is, in turn, the overriding consideration, but intense heat and monsoon rain are the main climatic problems. It is located near enough to the equator for a small overhead projection to shade walls facing south, but to the west a big verandah or other sun shade is essential. There are four main ways to shade a wall, verandah, sunbreakers, adjustable louver, jalli or grills, and all are in use at Chandigarh and their architectural character is exploited. In some, the superintendent type of house by Maxwell Fry for example, the two-story street front is marked by great rectangles of concrete jalli formed of small precast concrete units which, while linking the pairs of houses, give a magnificent and lacy texture—which looks especially fine at night. In another variant of the same design where the houses have been grouped round a square, sunbreakers are used to unite the whole side of a square so that the face of the building is of egg-crate formation, some of the more important openings being picked out in strong colour. These sunbreakers do not touch the main house wall behind, and so no heat is transferred by convection and in fact the rooms are remarkably cool. Where possible we designed two (which in India becomes three with the open roof terrace) story housing. This was partly to give an urban character and partly because the higher the roof the cooler the room. Where we could afford additional room height we gave this to the upper rooms, the lower having better insulation. The use of the roof as a bedroom made us design carefully to prevent overlooking!

One of the distinguishing features of nearly all the houses above the clerk grade is the barsati (a shaded area) and roof terrace—a flat roof has great point here—it is certainly cooler at night. The roof is a vast open-air room at night—often a starlight night. It is walled on four sides but with openings placed to allow the breeze to cross and cool the sleeper (any wall surface here becomes a radiator at night in the hot season). The architectural difficulty in terraces of houses was to give a good skyline since on the roof there is only need for a small shelter to sleep in case of rain and a protection for the stairhead. High cross walls where roofs are in use between house and house being, of course, essential for security. The raised and pierced front parapet wall is probably the best answer, giving a level skyline, but the return ends of blocks were often difficult to handle and raising the parapet walls on all sides rather expensive.

In the upper category houses spacious fine, wide verandahs and upper open-air rooms have been provided where the ladies of the house will probably pass many a pleasant hour talking and gazing at the ever-changing panorama of the mountains.

THE BIGGEST PROBLEM

The housing was the biggest and most complicated part of our programme. We tried, and the chief engineer also tried, to organize the standardization of fittings, kiln drying of timber, and mechanization of construction. At one time our floor slabs were lowered by crane and experimental prestressed concrete beams were used.

These attempts at wholesale organization were largely defeated by two factors. First the stranglehold of the existing Public Works set up, which included Government regulations for methods of purchase and competitive tendering so rigid that almost overwhelming resistance had to be overcome before new practises could be put into force; and secondly, the extreme cheapness of labour which made almost all mechanical inventiveness uneconomic.

Where no previous system existed, as in the question of controlled planning, we were able to create innovations. We made architectural zoning sheets for each sector, which enabled us to show visually and for all time what height and size of house would be permitted on sites and where servants' quarters and outhouses could be placed. By this visual means, the zoning plan forming a part of the deed of sale, the future of the zone was secured.

We designed the landscaping of the housing areas with the help of Mr. Randnawa and others, the trees for the different housing areas being

chosen more for a difference of form than flower. The principle was to give character and shade by planting; and asymmetrical avenues were used in some cases, dependent on aspect. The final picture of New Delhi is largely one of trees, but the fine avenues are often so similar that the visitor feels lost.

The chief engineer started a great nursery and the government has planted the trees and hedges and grass of the upper category houses. We did designs with theme and variation for gardens in all grades of housing and had passed a tree preservation act. The lake which was to help provide irrigation water was not built when we left and I do not know how much of all this has been carried out.

On the important streets we imposed more inclusive architectural control including the silhouette and in some cases the detail of the architecture.

We also enforced standardization of boundary wall designs, gates and number plates, even of dustbins and cowsheds. We insisted that designs of private work must be by registered architects, a rather wide category, and in important areas by fully qualified members of the Indian Institute of Architects or men with equivalent qualifications, but our chief hope of influencing the design in the town was, we felt, by example; and this proved to be true, most of the private developers copying—sometimes rather amusingly by forming a cocktail from the work of all three architects—the detail to be found in government housing.

The Prime Minister of Pakistan

The Hon. Mr. MOHAMMED ALI'S ADDRESS

The Hon. Mr. MOHAMMED ALI, Prime Minister of Pakistan, addressed a joint meeting of the Pakistan Society, the East India Association and the Over-Seas League at Over-Seas House on Tuesday, 8th February. The Hon. Mr. IKRAMULLAH, Pakistan High Commissioner in London, presided over a crowded attendance.

Mr. MOHAMMED ALI (part of whose speech was read for him, until his arrival from the Commonwealth Prime Ministers' Conference) said: I consider it a great privilege to have been invited once again to speak

to the members of the Pakistan Society, the East India Association and the Over-Seas League. Since June, 1953, when I spoke to you, many important developments have taken place in Pakistan. I was then heading a Government composed of the Muslim League, which was the majority party in Parliament. That party was in power not only at the centre but in all the provinces of Pakistan, including the acceding States. To-day I head a Government which is more broadly based. The Central Government, although still largely a Muslim League one, includes in it men of talent and ability who belong to other parties, and do not owe allegiance to the Muslim League. They are men who are able to command the confidence of a large section of the people in the country. Last year in March, as a result of a General Election in the important province of East Bengal—an election which was conducted on the basis of adult franchise—the Muslim League was defeated by a group of parties who banded together to form the United Front to fight the Muslim League. To-day, the Central Government includes representatives of the two main groups in the United Front. Therefore, the Central Government to-day is much more representative than it had ever been during the seven and a half years of Pakistan's existence.

The question that may be posed in your mind is how and why this change has come about. It all started almost a year ago when as a result of the East Bengal elections the entire complexion of the Provincial legislature was radically changed. A very peculiar situation arose in as much as the representatives of East Bengal in the Central Parliament, who belonged to the Muslim League Party, lost their representative character. East Bengal began to voice a demand for the dissolution of the Constituent Assembly on the grounds that the newly formed Provincial legislature, which serves as an electoral college for the election of the Province's representatives to the Central Parliament, had ceased to have confidence in the representatives elected by the previous legislature seven years ago. The Government then took the view that although a different party had come into power in the Province, it did not necessarily and constitutionally follow that the representatives would automatically have to be replaced by newly elected ones. Seven years had gone by, and no progress had been made in constitution making. It was, therefore, of vital interest to the nation that the work of Constitution making, which then was progressing satisfactorily, should not be allowed to come to a dead halt for the purpose of holding fresh elections, particularly when the Muslim League was in power in all the other provinces of Pakistan. It was felt that it would be possible to obtain East Bengal's concurrence to the new Constitution, even though the United Front representatives were not initially associated with it.

Soon after the United Front came into office in East Bengal the law and order situation in the Province began to deteriorate. The Ministry seemed unwilling to deal effectively with the situation. Riots, master-minded by Communists, took place at two of the largest industrial establishments in the Province, and resulted in the loss of four to five hundred lives. The Central Government was compelled, therefore, to step in. The Provincial Ministry was dismissed and the administration was taken over by the Central Government.

This action, as I have said, put the United Front "out of court." All hope of securing the United Front's informal association with the task of constitution making, or obtaining its support for the decisions of the Constituent Assembly, wherein it was not represented, had then to be abandoned. This was a serious matter, because in terms of population East Bengal constitutes the larger half of Pakistan. Forty-two million of Pakistan's seventy-seven million people live in East Bengal.

The Constituent Assembly still enjoyed, however, the confidence of the seven units that comprise West Pakistan, and it seemed to us that even although one unit, namely, East Bengal, was not represented in it, the Constituent Assembly should proceed with the task of constitution making. And so it did proceed, until in September last year it took certain decisions regarding the distribution of powers between the Centre and the Provinces, and the future status of some of the acceding princely States in West Pakistan. These decisions gave rise to a sharp controversy throughout Pakistan, and the Constituent Assembly lost the support it had hitherto enjoyed in West Pakistan. We were thus faced with this alternative: either to dissolve the Constituent Assembly and reconstitute it afresh so that it might reflect more truly the current political thought in the country, or we let a Constituent Assembly, which had lost the confidence of the majority of people in both wings of Pakistan, proceed with the task of constitution-making. In October last year the Governor-General, in consultation with me, decided that the latter course was out of the question. We, therefore, held that the Constituent Assembly could not continue to function and that a new body, more truly representative of both zones of Pakistan, should be elected afresh to finalize a constitution which would be acceptable to all provincial units in Pakistan.

FANTASTIC REPORTS

I have dealt with this question of the dissolution of the Constituent Assembly because this action has been misunderstood abroad due to fantastic press reports that have appeared in the foreign press. There appears to be a feeling that the Governor-General acted in a high-handed

manner and that Pakistan has drifted away from the path of constitutional government. Press reporters with a lively imagination, with a view to catering to sensation-mongering, designated the change as "a Palace Revolution" or "*a Coup d'Etat*." In actual fact it was nothing nearly so sensational or so romantic. Far from being a denial of democracy, the Governor-General's action was triggered by a desire to defend democracy. Democracy demanded that a Constituent Assembly which had forfeited the confidence of the people should cease to function. Democracy also demanded that a Constituent Assembly which had been elected before partition and which for the past seven years had failed to evolve a constitution acceptable to all sections of the people should be replaced by a representative one commanding the confidence of the populace. The fact that in dissolving the Constituent Assembly the Governor-General was acting in accordance with the wishes of the people was evident from the manner in which this was accepted by all the provincial legislatures and also from the fact that there was no adverse reaction anywhere in the country.

Although there is no Constituent Assembly now functioning, the work that it has done in regard to the framing of the constitution will not have been wasted. The major portion of the work that it has accomplished will be incorporated in the new constitution. The new constitution is almost ready, requiring some finishing touches. The proposals when completed will be placed before a national convention representing all the provinces.

In the meantime, we expect to simplify its task of framing a constitution very considerably by merging all the seven units of West Pakistan into a single provincial unit. In the past, our principal difficulty in getting agreement on constitutional provisions has been how to reconcile, in a federal pattern of government, the claims of East Bengal with those of the seven units in West Pakistan. This difficulty arises from the unique fact that one unit of Pakistan, namely East Bengal, has a population greater than that of all the other seven units put together. There is no federation in the world which has had to face a comparable situation. Apart from the other administrative and political advantages that would obviously flow from the merging of the seven West Pakistan units into a single province, we consider that this merger would greatly facilitate the task of devising a constitutional balance between East Pakistan and West Pakistan and enable the framers of the constitution to proceed with their work unhampered by any of the constitutional difficulties that often held up constitution framing in the past.

We are anxious that a new Parliament should come into being without delay. To ensure this, we are going rapidly forward with the West

Pakistan merger plan. All the provincial legislatures in West Pakistan have voted overwhelmingly in favour of the merger. The rulers of three Princely states, which are also to be merged in the new West Pakistan unit, have signed the necessary instruments of accession. A council for the administration of West Pakistan has been set up. It is composed of the Governors and Chief Ministers of West Pakistan. It is now engaged in working out the details of how the new province of West Pakistan is to be brought into being. We have no illusions on this subject. It will be a tremendous operation. The step we are taking is almost revolutionary in character. It is, however, essential in the larger interests of Pakistan. It would curb provincialism and facilitate the development of West Pakistan as a single economic unit which nature has designed it in fact to be. The Pakistan Government is determined to see this operation through. We expect the recommendations of the West Pakistan Administration Council will be in the hands of the Central Government before the end of next month, and the new West Pakistan Province may start functioning before the end of June. Once that is done, the deck will be clear for the finalization of our new Constitution on the basis of which elections to a new parliament will be held.

There undoubtedly has been delay in completing the Constitution but let us not forget that Constitution is only a means to better Government, not an end in itself. The developments of last September, which resulted in the dissolution of the Constituent Assembly, and the consequent delay in completing the Constitution have given the country an opportunity for second thoughts on the type of Constitution best suited to its needs. Those developments and that delay have been a blessing in disguise. We have had the opportunity to profit from our experience of seven years of independence and I make bold to say that even in the constitutional field we have been going forward. The progress in constitution-making done during these years will enable us to devise a Constitution based not on abstract political thinking, but one that will take full account of our country's genuine political aspirations and practical needs.

Now I turn to economic developments. In the past the factors that have tended to introduce the element of instability in our economy have been mainly twofold. First, in the matter of our food supplies, we discovered that we were not self-sufficient, and that we depended largely on the vagaries of weather and the supplies of water from canals which are fed by waters of rivers that flow through India. Secondly, the strength of our internal economy depended very greatly on the foreign exchange which we earned from our two main cash groups, jute and cotton. The prices of these commodities depend on factors which are beyond our control. We have to import a large variety of essential consumer goods.

Our ability to import essential commodities depends on our foreign exchange earnings, derived mainly from jute and cotton. As a result of world recession in prices of our raw materials, consequent on the cessation of hostilities in Korea, we found ourselves left with the choice of either suspending our long term economic development programme or imposing strict restrictions on the import of consumer goods. We decided that it would be in the larger interest of Pakistan's economic stability if we continued with our development and industrial programme with a view to making our country as self-sufficient as possible in essential consumer goods, although we knew that this course would entail considerable hardship to the people by denying them sufficient supplies of consumer goods. Our policy is now just about to pay dividends. In the textile field, we have reached self-sufficiency in the coarser varieties of cloth. Very soon we hope to be in a position to export cloth to neighbouring countries. In the matter of paper, we hope to reach self-sufficiency very soon, when our Karnafuli paper mill reaches the stage of peak production. This one industrial establishment has the capacity to produce paper to meet our entire internal requirements. More and more varieties of goods essential to the life of the nation are now being produced in substantial quantities. With the establishment of these industrial concerns, our need for import of these commodities is beginning to taper off. We hope that with the completion of our development plan, we shall be able to produce sufficient quantities of many varieties of consumer goods, which would result in making our country economically stable. We have embarked on a very ambitious development plan concerning food production. We are undertaking vast irrigation projects to ensure a sufficiency of food supplies independent of natural factors. We have made considerable progress, with the result that to-day we are not only self-sufficient in food, but are happily in a position to export substantial quantities of food grains abroad. In our objective of converting our essentially agrarian economy to a semi-industrial one, we are not unmindful of the need of bringing about a harmonious relationship between agriculture and industry.

Some of our friends have asked us: are we not being too ambitious in our development projects? Is not the pace of industrialization too rapid? The answer to these questions is that we in Asia have a tremendous leeway to make up. We are an under-developed country, and the sooner we begin to exploit our natural resources the better would be the prospect of improving the living standard of our people. The tempo of life in this world has increased and unless we keep pace with the march of progress in the advanced countries, we shall never be able to help the people attain a higher standard of living. During the last couple of

centuries we have remained in a state of stagnation while the West has marched forward rapidly toward industrial progress. We cannot afford to stand still any longer. We in the East are now awakening to newer and greater responsibilities. Our low standard of living must be improved, otherwise we shall not be able to survive this battle for existence. We cannot, therefore, allow the grass to grow under our feet.

It is a matter for gratification, therefore, that the United States is preparing to give economic aid to countries in Asia in a big way. In my opinion, the West can render no greater service to the cause of humanity, to the cause of freedom, than by helping to raise the living standard of the masses of Asia. The battles of freedom against godless totalitarianism will be fought in Asia, not on the battlefields but in its numerous villages, not with guns but with bread. Is it a matter for wonder that we, whom centuries of progress have bypassed, should now be impatient to make up for lost time? If the countries of Asia do not go rapidly forward, they shall go under.

We in Pakistan have taken our stand firmly on the side of free democracies. As you are aware, we have entered into a Mutual Defence Assistance Agreement with the United States of America. This would enable us to build up our defences. Situated as we are, we have a deep interest in the security and well-being of the Middle East. We have, therefore, signed an Agreement of Friendly Co-operation with Turkey. This agreement provides for co-operation in the cultural, economic and defence fields. We are gratified to learn that a defence agreement will soon be signed between Iraq and Turkey, and we hope that other countries in the Middle East may also find it possible to enter into similar arrangements. We consider it vital to the maintenance of international peace that the military and economic strength of this vulnerable region should be quickly built up.

Our geographical position compels us similarly to take an interest in the security and welfare of the South East Asian countries which adjoin East Pakistan. We are prepared to make such contribution as we can to the promotion of security and progress in that region. With that end in view we have joined a South East Asia Collective Defence Treaty, which provides for economic assistance to participating countries in that region and for such other assistance as may be required for defence against aggression or internal subversion. I must emphasize that all these agreements are not aimed against any particular country. We have entered into them in the sole belief that we may thereby help to strengthen the cause of international peace.

Since I last spoke to you, a number of potential causes of conflict have been happily resolved. The Trieste question has been settled. The

war in Korea and the conflict in Indo-China have ended. In the Middle East, the welfare of which is of special concern to us, the Suez Canal and the Anglo-Iranian oil disputes have been satisfactorily settled. I wish it were possible for me to say that the terrible plight of the Arab refugees from Palestine had also ended. Unfortunately this problem still remains unsolved. We believe that so long as this question is not satisfactorily settled, the great injustice done to the Arabs who have been driven out of their homes in Palestine would continue seriously to agitate the minds of millions of people whose sympathies are naturally with these refugees.

Nearer at home, we are endeavouring our utmost to improve our relations with India. These continue unfortunately to be embittered by the continuance of the Kashmir dispute. It must be a matter of the utmost concern to the conscience of the free world that after seven long years, the four million inhabitants of Kashmir should still remain denied of the right to self determination. The continuance of this dispute constitutes a serious potential threat to peace in Asia. It is because of the gravity of this question, that I have earnestly striven to seek its solution in negotiations with Mr. Nehru. I expect to meet him again next month and hope that some definite step forward in its solution may then be taken.

In the meantime, in the Far East, a new threat to world peace has arisen in regard to the question to Formosa. It constitutes a challenge to world statesmanship. Given good-will on both sides, I am confident that this dispute can be peacefully resolved.

Despite the dark clouds that hang over the Far East to-day, the international scene presents a brighter picture than it did twenty months ago. This is a prospect at which all peace-loving people may rightly rejoice. Let us hope that the forces of peace will continue to assert themselves, and that mankind will be saved the devastating horrors of a third World War.

REPLIES TO QUESTIONS

Replying to questions by Mr. ABBAS, Mr. PERSHAD, Mr. YUSUF ALI KHAN and others, Mr. MOHAMMED ALI said that the question of Kashmir was not discussed at the Prime Ministers' Conference. Admittedly this was a dispute affecting two members of the same family, and it was most desirable that it should be settled by the other sister nations of the Commonwealth, but unless both parties concerned gave their consent, the matter could not be taken up. He did not wish to disclose the name of the dissenting party. Pakistan, he added, subscribed to the Charter

of the United Nations, and had done everything that could be done to bring about a peaceful settlement of the disagreement by negotiation. Although so far there had been failure he had not lost hope of eventually arriving at a settlement with India.

One of the chief factors which made the Commonwealth a strong organization was that each member nation was free in regard to its external affairs, and thus could adopt any policy suitable to itself. Pakistan had a peculiar geographical feature. East Pakistan and West Pakistan were separated by a thousand miles. The western zone was in the north-west of the Indo-Pakistan sub-continent, and therefore West Pakistan was vitally interested in the security of the Middle East. The Eastern zone was interested in the well-being of south east Asia. Therefore Pakistan was interested in two regions; its foreign policy had to be tailored accordingly, and it could not adopt a common policy with India.

Asked whether he could give a specific date when the new Constitution would be ready, Mr. Mohammed Ali stated that it was almost ready, but needed a few finishing touches. It would then be placed before the national convention (representing all the provinces) for ratification. When the Constitution had been finalized by that convention, elections would be held.

In his brief concluding remarks, His Excellency Mr. IKRAMULLAH said:

The Hon. Prime Minister has answered a number of questions and I think he needs a rest. [Here the Prime Minister protested]. I am sorry, the Hon. Prime Minister is offering to go on indefinitely, but I have just explained to him that we must vacate this room. We must, however, thank him for a most interesting talk and you will agree that the answers he has given to the questions asked have been most illuminating.

Sir FREDERICK BOURNE, in moving a vote of thanks, said that members present had begun by having to put up with the Political Secretary in place of the Prime Minister, and would now have to put up with him in place of Lord Hailey. He was very much afraid that he was not an adequate substitute. [It was afterwards found that Lord Hailey was actually in the building, but had been unable to get into the hall owing to the large crowd]. Sir Frederick expressed his intense admiration of the Prime Minister's vitality. He had run half way to the meeting place, and arrived as lively as a cricket. His replies to the questions were masterly. He knew that all of them would have liked to listen to him very much longer.

The Progress of the Colombo Plan

A JOINT MEETING of the East India Association with the Pakistan Society and the Over-Seas League was held on Tuesday, 14th December, 1954, at Over-Seas House, when an address on the Progress of the Colombo Plan was given by the Most Hon. the Marquess of READING, CBE, MC, TD, QC, Minister of State for Foreign Affairs. The Rt. Hon. Lord HAILEY, PC, GCSI, GCMG, GCIE, presided. The address was reported in the January ASIAN REVIEW (pp. 3-12) and was followed by a discussion and questions.

Colonel BARRETT thought India was a contributor to the Colombo Plan. If so, he would like to ask Lord Reading whether he considered that Pandit Nehru was an honest approver of the Plan or of any participation of the West in the East.

The MARQUESS OF READING replied that India contributed to the Colombo Plan largely in the shape of technical assistance, in which she was more advanced than the others. The answer to the second part of the question was "Yes".

Sir STANLEY REED said that he was struck by two points in Lord Reading's lucid address. One was the psychological effect of the Colombo Plan, so amazingly bold and imaginative, on Governments grappling with the immense problems which came under their new constitutions, and the other was a question whether there were any reciprocal obligations on the part of the receiver countries towards the giver countries because he was not entirely happy in the knowledge that everybody in this country and others would have to pay more for a cup of tea because India and Ceylon had imposed a still higher export duty thereon. When the distinguished Prime Minister of Ceylon was here recently he signed a contract to supply 10 million lbs. to firms in France, and he did not think France was a contributor to the Colombo Plan in any form. The Indian railways were mentioned, but of the greatest contract of £13½ million not one *anna* came to this country or to the Commonwealth, which is carrying this great responsibility.

He had been tremendously impressed by the vast increase in the food production of India, but there were many millions more people to eat it. This was a domestic problem transcending all others. Could the acceptance of the Colombo Plan in any internal development maintain that increase, and not only maintain it but increase the standard of living?

The MARQUESS OF READING replied that there was no reciprocal obligation; one could point to such instances as had been quoted, but at the same time if one tried to add conditions to an organization such as the Colombo Plan that purchases should be made in this country and not in that, the Plan would get nowhere. There would be a complete revulsion on the part of the Asiatic countries. He thought on the general commercial dealing we had to stand on our own competitive feet. At the same time we had, of course, sold to these countries in past years, even in the difficult conditions then obtaining, very large quantities indeed of capital goods. He did not think we could hope to have an entire monopoly; we had not done too badly one way and another. On food production he agreed. He thought he had said that one of the great problems was to overtake the increase in the population before one could advance. One country, Malaya, was now in that position and he hoped other countries would equal that achievement before long.

Sir WALTER GURNER wished to put two questions, the first relating to the anomalous position of the United States, which was a full member of the economic side of the Plan but was not a member of the Technical Assistance Board, only attending through representatives in a liaison capacity. Secondly, what, so far as could be defined, was the relation of our responsibilities under the Colombo Plan to our position as a colonial power, particularly in Malaya and other parts?

The MARQUESS OF READING said that the position of the United States might seem anomalous in theory but in practice it worked. The United States, being a full member, attended the Consultative Committee and shaped her policy of financial help in these countries in conformity with the general conclusions of the Colombo Plan Committee. It was valuable to have her interest and collaboration in that way. If she did not come into the Technical Assistance Committee, she kept a liaison officer there and duplication was avoided in that way. The United States had the enormous Point Four Technical Assistance arrangement in the world at large and it suited her to deal with it on that basis rather than come separately into the Colombo Plan. Although it might sound curious in theory, in practice it worked very well.

On the second point, Singapore, Borneo and Sarawak were represented on the Colombo Plan Consultative Committee as part of the British delegation. There were at Ottawa representatives from each of these countries and they took a most useful part in the discussions. They were treated just as other countries were treated, although the bulk of the assistance which went to them came from British sources.

The Rev. GEORGE APPLETON asked if Lord Reading could give any indication of the financial contribution which Great Britain was making towards the Colombo Plan. He had tried from various reports to get some estimate, but it was very difficult to get exact figures. His impression was that we were not making a very generous financial contribution. Secondly, was there any hope of the Government taking money from the defence budget and putting it into the Colombo Plan?

The MARQUESS OF READING said that on actual finance a good deal was set out in the Report just being published. It would not be forgotten that the first problem under both Governments was to try to get our own economic position stable before we could launch into very large schemes in other countries, and from that point of view the major contribution of this country up to now had been the release of sterling balances to India, Pakistan and Ceylon, at the rate of £42 million a year. We had also made increasingly heavy contributions to the International Bank of Reconstruction by way of sterling loans, through the Commonwealth Development Finance Company and the London Market by giving facilities for raising loans on favourable terms, and not long ago, during the past year, Pakistan continued to draw on a £10 million credit which was agreed the year before for schemes directly contributing to agricultural development. There had been very considerable expenditure in Malaya and North Borneo, of course, and we were also making a by no means negligible contribution to the Technical Assistance Scheme.

With regard to the suggestion that something should be taken off the defence budget, he was afraid that the defence budget in the present position of world affairs had and must have priority. If there came a time when more resources were available, he had no doubt that the Government would be very glad to contribute more fully to the assistance of this part of the world. We must discharge our obligations in the region of defence. If that broke down and other countries followed our example, the Colombo Plan would not be a very useful contribution to any of the countries of South and South-east Asia.

Colonel KEIGHLEY BELL asked if there were any considerations attached to the release of the £42 million sterling balances, or could the three countries spend the money where they liked?

The MARQUESS OF READING replied that there was a bilateral arrangement. The balances were released for agreed schemes; they were not just poured into their laps.

Mr. VIVIAN DAVIES said he would like to ask Lord Reading if it was possible to have a guarantee with regard to the advancement of capital under the Plan. He had in mind the possibility of industries being nationalized or expropriated. He had heard it said that the number of schemes which had been put forward was rather disappointing when a report of the first year's operation was given to the Royal Society of Arts. He did not know whether more schemes had been started since then. As a taxpayer he was rather concerned that he should put his hands into his pockets for a scheme for increasing the population of eastern countries. The population of these countries was being poured into the world without adequate food for them, and he had heard it said that the policy of certain Asian countries was to do nothing about curtailing their population because they believed that a large population gave them strength in competing with countries which were more prudent.

The MARQUESS OF READING said that no guarantee was given under the Colombo Plan for the investment of private capital. The schemes must be judged by people who were thinking of investing in the same way as other undertakings of the kind in the world were judged. He did not think any government could give a guarantee to private finance of that kind. Some of the countries, while saying that they would like private enterprise, had not been very wise in taking measures which would scare it off. He thought most countries had on their hands as much as they could tackle at the moment both financially and administratively. There was in most countries a definite absorptive capacity which was largely dictated by the number of qualified people available to run the particular schemes as they were being developed and after they had been developed. He doubted whether, until matters had gone further, there was a great opportunity for any more very big schemes, although there were always new schemes coming forward. There was no lack of schemes; the only lack was that of finance and the trained personnel to run them.

With regard to the position of the taxpayer paying for an increasing population, he was not sure that that was not founded on a fallacy. He thought it was generally recognized that the higher the standard of living, the lower the birth rate. If the standard of living could be increased, it might well be found to have the effect of setting some limit on the birth rate. When a country chose to do this was a matter for itself.

The CHAIRMAN said that Lord Reading had successfully unravelled with the utmost clarity what might have been a very arid subject and he had lent it a certain air of romance. He was moved by one suggestion

he made that one should, if possible, take one's mind back to some of the great men of the past to whom he referred who did so much in India in the earlier days and what would have been their impression if they had known of these schemes. They had to contend with so many adverse conditions and such poverty of machinery. He had never met these really great men of the past; he had read about them, but he belonged to a service to which they lent lustre, and he thought he could say they would have welcomed it heartily. They were not interested in constitutional advances or in the political situation; they were doing their best, as so many had done their best, to raise the standard of living of the people. It was the introduction of order, the recording of titles in the land to give security, the spread of hospital facilities and medical attendance, the spread of education and later on the discovery of the enormous benefit which irrigation could bring to India, which was their life, and he was sure they would be the first to welcome a programme of this kind.

He had also read some of the reports and pamphlets which had been sent to him about the Colombo Plan and he had noticed a certain tendency to refer in pamphlets and elsewhere to a great number of achievements of India and Pakistan as though they were the achievements of the Colombo Plan. Nothing that Lord Reading said would give colour to that, but he thought there would be in the minds of uninstructed readers an impression that it was owing to the stimulation of the Colombo Plan that India had entered on these great schemes of irrigation, power distribution and the like, and it was only fair to say that in 1947 when the British left India, they left 75 million acres of irrigated land made possible by government loans or grants. The total irrigation of Egypt, of which so much was heard, was five million acres.

There was a great deal of talk about the necessity for the introduction of various methods of birth control so that India, for instance, could keep down the perpetual increase of population which again and again threatened to overcome the increase in production. Again and again it was said canals could be built and industries increased, but whatever one did it would be overcome by the increase of population. The best way of keeping down this increase of population, the best measure of birth control, was to raise the standard of living. When irrigation was brought to the Punjab there was a remarkable drop in the birth rate. The Punjab was a scarcity country with a rapidly increasing birth rate, but in the canal zones the age of marriage was deferred. The way to achieve a permanent and effective measure of birth control was to raise the standard of living, and all that was being done in the Colombo Plan would aid that end.

Lord PETHICK-LAWRENCE moved a hearty vote of thanks to the speaker. He said he was owed a double vote of thanks, first of all for the extremely able way he had laid the facts of the Colombo Plan before the meeting and for the facility with which he had replied to questions. Secondly, because Lord Reading was giving his services to the Colombo Plan and in doing that he was carrying on the great tradition of this country towards India and all those who had worked for India and who had the interests of India (when he said "India" he meant India as it was, India and Pakistan), at heart. He was delighted to think that the most capable services of the lecturer were being devoted in a different kind of way, but not less effective, to the promotion of the prosperity of these countries.

The MARQUESS OF READING, in acknowledging the vote of thanks, said that if some writers seemed to attribute more credit than they should to the new governments, as distinct from the old, it was wrong. He had seen a number of schemes on the spot and whatever people who wrote pamphlets might say, those working the schemes were the first to tell him that the schemes had come into being in the time before 1947 and to give credit where credit was due.

The Indus Canals Waters

Problem

By Professor L. RUSHBROOK WILLIAMS, CBE

A JOINT MEETING of the East India Association and the Over-Seas League was held on Wednesday, 23rd February, 1955, when an address on the Indus canals waters problem was given by Professor L. Rushbrook Williams, CBE. The Rt. Hon. Lord Hailey, GCSI, GCMG, GCIE, presided.

Lord HAILEY, in introducing Professor Rushbrook Williams, referred to his past connexion with India, both as Professor at Allahabad University, as author of the yearly reports on the Moral and Material Progress of India, and as Adviser to the Indian States. He, Lord Hailey, had been much struck by a very carefully considered and balanced article which Professor Rushbrook Williams had contributed to *The Times*

dealing with the question of the distribution of the waters in the Indus valley between India and Pakistan. It was a highly controversial question, but one of real and dynamic interest, involving issues which were of greater importance to the two countries than many of the matters they heard much about in the press. India and Pakistan had between them a far greater area of land irrigated by State canals than any country in the world. But the address they were about to hear did not deal with the general question of irrigation or the great debt which India owed to her irrigation engineers; it dealt with the dispute which had arisen about the distribution of the available supplies of irrigation water, the issue of which was perhaps more vital to India and Pakistan than the conflict of views about Kashmir.

Professor RUSHBROOK WILLIAMS: So far from being impatient, as you, my Lord, accused me of being during your very kind introduction, I really feel regretful that the time has come for me, and not you, to deal with this extremely tricky and delicate subject. Because in light of the services which you, Lord Hailey, have rendered to the solution of difficult problems in Africa, to say nothing of your sterling services in the Indian sub-continent, I feel sure that our audience will agree that you and not myself are the right person to handle so explosive a subject. It is indeed with considerable trepidation that I approach it; I am only emboldened to do so by the feeling that a stage has come which, although not perhaps one of complete finality, makes it possible to trace the dispute back to its origins and to see the shape of a possible solution emerging. I should like, if I may, to deal with this subject, although it is packed with human interest and human tragedy, in the rather bloodless and non-partisan way that historians do because, in spite of rather lengthy divagations into administration and journalism, it is as an historian that I have been trained, and it is as an historian that I shall think.

Let me first remind you that this dispute over the canal waters of the Indus Basin is by no means unique. Perhaps the characteristic of the century in which we live has been the shortening of distances, and the tendency of what might be called economic boundaries to overlap political boundaries. Although the dispute between India and Pakistan over the Indus canal waters has been among the most acute, it differs from other similar disputes not in kind but in degree only. I would remind you of the difficulties which were encountered in the United States of America in reconciling state rights with the over-all scheme of the Tennessee Valley Authority; of the negotiations at present being pursued, with so much pertinacity, by Mr. Eric Johnston for the utilization of the Jordan waters by the riparian owners, Israel-Jordan-Lebanon-Syria.

ORIGINS OF THE DISPUTE

The dispute over the Indus canal waters may best be considered, I think, by taking Aristotle's advice of going back to origins. Fundamentally, the crux has arisen because an area which had been planned by irrigation engineers without regard to political de-limitations became divided along political, not economic, lines following the partition of the Indian sub-continent. The dispute which arose seems to have followed familiar lines, and the analogies which I have already given provide some sort of a parallel. But, as I shall endeavour to show, there are two local factors which, from the historian's point of view, can only be regarded as gratuitous aggravations and account very largely for the extraordinary acuteness of the dispute which followed. The first of these was that the political boundary line resulted in an unequal division of the engineers' work. The second is that the areas concerned happened to be the East and West Punjab, the scene of some of the greatest tragedies which accompanied the actual physical partition of the sub-continent. If I may indulge in speculation, I would hazard the guess that if, for example, the dispute had been between let us say Rajasthan and Sind, it would have been far less bitter. But because it concerned East and West Punjab as the representatives of the two countries, it was infused with an element of bitterness which from the very start made working agreement extremely difficult.

In order to get the situation a little clear, I will remind you briefly of the physical configuration of the Indus basin. The Indus system of rivers consists of the main river Indus, five tributaries from the east, the Jhelum, Chenab, Ravi, Sutlej and the Beas, and a few tributaries from the west, the most important of which is the river Kabul. The main river Indus rises in Tibet and after flowing through Kashmir enters Pakistan tribal territory. The valley of the river in its upper part is separated from the rest of Kashmir by high mountains. The river Jhelum rises in Kashmir and enters Pakistan before it emerges from the hills. The waters of these two rivers, which between them carry about two-thirds of the total flow of the entire Indus system, thus enter Pakistan before large extractions of water are possible from them. The river Chenab rises in the Indian Punjab and after flowing through Uttar Pradesh and the Jammu province of Kashmir, enters Pakistan soon after it emerges from the Himalayas. Apart from the two minor canals in Jammu the entire waters of this river flow at present into Pakistan. The rivers Ravi and Sutlej pass at first through India and then through Pakistan. The river Beas lies wholly within India. No major canal exists on the Beas, but on the Ravi and Sutlej there are canals both in India and in Pakistan.

Prior to partition an elaborate system of canals was developed in the Indus system of rivers. Some of the earlier canals were constructed either alongside the rivers or to protect the then existing perilous cultivation in the eastern part of the Punjab. But, during the sixty years preceding partition, the emphasis was on schemes of irrigation which would irrigate lands belonging to the Crown, so that the Government of India could earn revenue not only from water rates, but also from the sale of Crown lands. Most of these lands lay in the area which is now in Pakistan, and this is the reason why the bulk of the irrigation canals lie in Pakistan. The result of the division, broadly speaking, was that of the 23 principal perennial canals from the Indus system only two lie in India, as against twenty in Pakistan, while one is divided between the two. Of the eight non-perennial canals, one lies in India and seven are in Pakistan. In addition there are a large number of inundation canals mostly in Pakistan. As a result of partition the area irrigated by the Upper Bari-Doab Canal was cut in two; the upper part fell within India, the lower in Pakistan. Also while the head works at Ferozepur lie in India, one of the three canals taking off above it, the Dipalpur Canal, irrigates Pakistan exclusively, and the other two, the Eastern and the Jam, India. The net effect is that although the development of the Indus basin had been planned by British engineers as a whole, the fruits of the works which had actually been carried out were unevenly distributed. Pakistan received 18 million field acres of irrigated land while India received five million only. It has to be noted, however, that India has a population of 20 millions in the Indus basin as against Pakistan's 22 million, and has also 35 million acres crying out for irrigation from the Indus basin sources. Partition thus gave India a comparatively undeveloped area, combined with complete control over the upper waters of three of the six rivers, upon which most of the canals in both countries depend.

LORD RADCLIFFE'S HOPE

It should be noticed that in the course of defining the boundaries between India and Pakistan Lord Radcliffe (then Sir Cyril Radcliffe) expressed the hope that where the drawing of a frontier could not avoid disrupting such unitary services as canal irrigation, railways, and electric power transmission, a remedy could be found by agreement between the two States for some joint control of what had hitherto been a valuable common service. In a striking passage he wrote: "I am entitled to assume with confidence that any agreement existing at the time of partition as to the sharing of the waters of these canals, or otherwise, will be

respected by whatever government thereafter assumes jurisdiction over the head works concerned." From what I have said in regard to the inter-connexion of the canals feeding Pakistan with the head works controlled by India, you will realize how deeply important it was for both countries that the hopes expressed by Sir Cyril Radcliffe should have been realized. Unfortunately, at the time when he wrote, he had no conception of the tragedies which would attend the act of physical partition, and he therefore made no allowance whatever for the nationalist passions aroused, by natural consequence, on either side.

On 1st April, 1948, there occurred the first hostile move which in many respects set the note for this unhappy dispute; a note which is only just now, to our great relief, being altered in favour of a more rational approach. On 1st April, 1948, the East Punjab Government, in control of the head works at Madhopur on the Ravi, and at Ferozepur on the Sutlej, cut off water supplies entirely from the canals in Pakistan which those head works feed. This rather drastic action was, I believe, due to a wholly technical dispute in the first instance. The canal colonies in Pakistan served by these head works did not pay the standard water dues. The people in charge of the head works were applying exactly the same kind of sanction that they would have applied in an undivided India—no canal dues, no water. But now that political partition had intervened, the effect of what in the old days would have been a routine administrative action was deplorable. Something like one and a half million acres irrigated from the Bari-Doab and the Dipalpur canals were threatened, and for five weeks there was no water at all. The physical effects of this action were tremendous, but they pale into insignificance in comparison with the psychological effects. In the first place, cutting off the water introduced an atmosphere of exaggerated political bitterness into the dispute, thereby fanning the deep and bitter resentment growing up between East and West Punjab because of the refugee problem and the killings, and in the next place it infused into the minds, not only of the cultivators affected but also by transference in the minds of the Pakistan Government, a profound distrust of the canal waters policy of the new Indian Government. It was from that moment that the protagonists on both sides began to appeal to the principles of international law, and it may be of considerable interest to pause in our narrative to examine what those principles are.

It was in an effort to elucidate the problems of inter-statal riparian rights and to apply definite principles to schemes for the partition of the Jordan waters that Professor H. N. Smith, some five years ago, decided to seek guidance from the United States. As he pointed out in an article contributed to the October, 1949 issue of *International Affairs*, some of

the most useful precedents are found in that country where, in the course of the present century, a number of inter-statal disputes upon water rights have been brought before the Supreme Court. Now the traditional rule of international law, as developed in Europe, on riparian rights is that a riparian against another riparian is entitled to the natural flow of the water without contamination, diversion or other alteration to his detriment. In the United States, however, the case law evolved by the Supreme Court on matters of diversion of water for irrigation purposes has modified this traditional view as between States of the Union by distinguishing between arid or semi-arid lands and other lands. In States which are well watered the traditional European rule is observed; but in States where water is less plentiful the old doctrine of riparian rights is modified to allow for reasonable use of water in irrigating adjacent lands. Moreover in States where arid or semi-arid land which needs water bulks largely, the doctrine is deemed inapplicable. It is there replaced by the doctrine of appropriation which was thus defined by the Supreme Court in the case of *Wyoming versus Colorado*: "The diversion of the stream and the application of the water to a beneficial purpose constituted an appropriation, and the appropriator was treated as acquiring a continuing right to use and divert the water to the extent of his appropriation, but not beyond what was reasonably required and actually used. As between different appropriations from the same stream, the one first in time was deemed superior in right, and a completed appropriation is regarded as effected from the time the purpose to make it was definitely formed and actual work thereon was begun, provided the work was carried to completion with reasonable diligence." And the Court proceeded to remark: "The contention of Colorado that she as a State rightfully may divert and use as she may choose the waters flowing within her boundaries in this inter-State stream, regardless of any prejudice that this may work to others having rights in the stream below the boundary, cannot be maintained. The river throughout its course in both States is but a single stream wherein each State has an interest which should be respected by the other."

DOCTRINE OF APPROPRIATION

On the other hand, in applying the doctrine of appropriation, the Supreme Court has held that strict adherence to the priority rule is not always possible. For example, if the whole economy of a region has been founded on a junior appropriation, the Court does its best to protect this as far as possible, while still maintaining priority of appropriation as the main guiding principle. This flexibility in applying the doctrine

of appropriation and this readiness to take into account such relevant factors as the consumptive use of water in several sections of the river, the extent of established use and the like, led Professor H. A. Smith to the conclusion that in the United States inter-statal cases of diversion there were no absolute legal rights on either side, the basic principles of decision being, in his view, an equitable apportion of benefits. But those of you who have read the January 1955 issue of *International Affairs* will recall that something like a supplement to Professor Smith's view has been supplied by Dr. Jan Hostie, who is Honorary Legal Adviser to the Belgian Foreign Office. Dr. Hostie, after examining the cases cited by Professor Smith, and citing others which Professor Smith did not mention, concludes that in all relevant cases the Supreme Court has in fact applied a general rule of law mitigated where appropriate by equity. This rule he defines as follows: "The general rule of the law governing the whole subject of derivation was, and remains, that a riparian state must abstain from causing substantial injury to another riparian state of the same river system by diversion including storage." Special rules have, however, been evolved to limit the scope of the general rule such as the doctrine of appropriation. And in that connexion it is relevant to add that in the case of Washington *versus* Oregon, the Supreme Court added: "A priority once applied may be lost to the tenant by abandonment or *laches*. Only diligence and good faith would keep the privilege alive."

It will be plain, therefore, that according to the principles of the inter-statal law of riparian rights, as evolved in the United States, the claim put forward by the East Punjab Government in 1948 that the water belonged to them because they owned the head works, would be generally regarded as untenable. Fortunately at that time, in spite of the harm that was done to relations between the States of East and West Punjab, relations between Delhi and Karachi still continued sufficiently close to ensure that meetings about matters of common concern took place at intervals. In the Joint Dominions Conference, an institution which has now unfortunately perished, this matter of the dispute between East and West Punjab came up. The result was that, very largely at Mr. Nehru's instance and by agreement between him and Mr. Ghulam Mohammed, the document known as the agreement of the 4th May, 1948, was finally drawn up.

This is so important from the part that it played in the later sections of the dispute that I must refer to salient passages of it. "The contention of the East Punjab Government is that under the Punjab Partition Order 1947 and the arbitral award the proprietary rights in the waters of the rivers in East Punjab vest wholly in the East Punjab Government, and the West Punjab Government cannot claim any share of these waters

as a right. The West Punjab Government disputes this contention." "The East Punjab Government has revived the flow of water into these canals on certain conditions of which two are disputed by West Punjab. One which arises out of the contention is the right to the levy of seignorage charges for the water, and the other is the question of the capital cost of the Madhopur head works, etc." Then we come to the body of the settlement. "The East and West Punjab Governments are anxious that this question should be settled in the spirit of goodwill and friendship. Without prejudice to its legal rights in this matter, the East Punjab Government has assured the West Punjab Government that it has no intention suddenly to withhold water from the West Punjab without giving it time to tap alternative sources. The West Punjab Government on its part recognizes the natural anxiety of the East Punjab Government to discharge the obligation to develop areas where water is scarce, and which were under-developed in relation to parts of the West Punjab." "The West Punjab Government has agreed to deposit immediately in the Reserve Bank such *ad hoc* sums as may be specified by the Prime Minister of India. Out of this sum, that Government agrees to the immediate transfer to the East Punjab Government of the sums over which there is no dispute. After an examination by each party of the legal issues, of the method of estimating the cost of water to be supplied by the East Punjab Government, and of the technical survey of water resources and the means of using them for supply to these canals, the two Governments agree that further meetings between their representatives should take place." This agreement was signed by Mr. Nehru and two other Ministers for India, and by Mr. Ghulam Mohammed and two other Ministers for Pakistan.

FURTHER DISPUTES

Had the subsequent relations between the two Governments been of a friendly character in all probability that arrangement would have worked out well. Unfortunately that was not the case, and although the agreement gave a useful respite for some time, it did in fact lead to further disputes. India claimed, on that document, that the money which was supposed to have been deposited had not in fact been deposited properly and promptly; and she also complained, as time went on, that Pakistan was taking inadequate steps to make up from her own alternative sources the supplies of water which East Punjab needed for her own new canal developments. On the other hand Pakistan retorted by claiming that the agreement had been concluded under duress and was invalid for this reason, besides running counter to the ordinary principles of international

law. In her offer to submit the case to arbitration Pakistan, no doubt believing that the principles of international law would lie largely in her favour, suggested reference to the International Court of Justice. That position was challenged by India which objected to a reference to the International Court of Justice on two grounds: first, that such reference had been tacitly ruled out as a means of resolving disputes between two members of the British Commonwealth; and secondly, on the grounds, which were perhaps stronger, that in certain respects this dispute was not justiciable at all because it dealt with the sovereign rights of sovereign countries. Behind India's stand on her sovereign rights there lay the desperate and very pressing needs of her own cultivators. She was willing to refer the dispute to an arbitral tribunal, but Pakistan objected to its proposed composition.

Matters continued in this rather uneasy condition, with tension rising between the two States whenever there was a water shortage due to a bad monsoon or otherwise, until the spring of 1951. This marks the second phase of this dispute, which resulted from a visit to India of Mr. David Lilienthal, of Tennessee Valley Authority fame; who has great experience in the economic development of territories held by different political units. After he had made his reputation in the Tennessee Valley he interested himself in similar problems in other parts of the world, and the Indus valley position intrigued him very much. When Mr. Lilienthal went back to America he wrote an article in *Collier's Magazine* which had important consequences. - I do not propose to read it to you, but those of you who have followed the controversy between India and Pakistan over the division of the canal waters will remember that this article provides useful ammunition for propagandists on either side. You have only to pick out the passages dealing with the point of view you favour and you will find quite a lot which is helpful.

But it is important, I think, to read the article as a whole; and there is only one particular passage which I want to pick out in order to do justice to Lord Radcliffe. After Mr. Lilienthal has surveyed what is to him the tragedy of the break-up of a magnificent irrigation system (which the engineers were neatly developing) by these hard-faced fellows the politicians, he goes on to remark: "Why the flow of the Punjab's life-blood was so carelessly handled in the partition, no one seems to know." The answer to that is the passages which I have already read in Sir Cyril Radcliffe's report. At the time when that report was put in there was no reason to suppose that political passions would be so excited as to override the principles of give-and-take which he was assured would prevail. But it is interesting to notice that Mr. Lilienthal fell into exactly the same trap with far less excuse, because what he suggested was the

necessity of reverting to the planning of the entire Indus basin as a whole. He plumped for what was plainly a kind of Indo-Pakistani adaptation of the Tennessee Valley Authority, which was to be set up by agreement between the two countries for the benefit of both. This was all very nice if it had been practical politics, but Mr. Lilienthal under-estimated the political difficulties and, indeed, made rather a worse miscalculation than Lord Radcliffe had done, because Mr. Lilienthal at any rate had the bitter feeling between India and Pakistan in front of his very nose. In the course of his article he actually refers to the dispute as being "pure dynamite"; "a Punjab powder keg," and concludes that "peace in the Indo-Pakistan sub-continent is not in sight with these inflammables lying about."

A JUST APPRECIATION

But as a whole the article is an extremely just and fair appreciation of the situation, and I would commend perhaps to my audience this particular passage: "Pakistan's position that she has the legal right to the uninterrupted flow of water; a right to the share of waters stored by India's dams upstream is quite inadequate to this great issue, however sound her legal claim might be . . . The International Court of Justice might decide the legal issue in Pakistan's favour if India would submit to it. But this would not bring peace, for India's food problem would still be on her back. Such a legal decision would not prevent the waste of most of the precious waters of the Indus, it would further antagonize India and certainly it would not start these countries down the road of active partnership in developing their common resource, the six rivers on which their millions depend for their livelihood in the future." He, as a trained engineer, then goes on to summarize the actual position of the Indus basin as a whole. "Less than 20 per cent of the water of the Indus basin is now put to use as irrigation; most of the water of the six life-giving rivers of the Indus basin flow into the Arabian Sea unused. If this waste of water, or even a large fraction of it, is put to use both India's needs and Pakistan's needs could be more than met." It is, of course, on the basis of that finding of his, which is undisputed from the engineering standpoint, that he proceeded to put forward his solution—the development of the Indus basin by a joint Indo-Pakistani authority. Furthermore he frankly says: "Such planning of the water resources and the accompanying potential electric power of the Indus basin is nothing new. It was for generations largely a function of the British-trained Indian engineers of the State of Punjab. They saw the river basin as a unit, as it is in nature. Then partition, a politico-religio instrument, fell like an axe."

The importance of that article in practical politics is that it caught the attention of the International Bank, which Mr. Lilienthal had suggested as a suitable agency for financing this combined inter-statal development. And although Mr. Lilienthal hopelessly underestimated the violence of Indo-Pakistani differences he had hit upon the germ of the idea which, we all hope, will provide the ultimate solution. The International Bank became interested. Under the leadership of Mr. Eugene Black it offered its good offices both to India and Pakistan to help them work out a solution of the Indus problem; at first on the basis of the Lilienthal proposals. Both countries accepted the suggestion and they agreed that while the co-operative work continued under the auspices of the Bank there would be no interference with the existing use of the supplies available. This agreement was signed in March, 1952. By June 1952 the first of a long series of conferences opened at Washington; they were continued at Karachi and then at Delhi, and statistical information on a very large scale was collected and much clearing of the ground was done. But it very quickly became clear that neither government, each for its own reasons, would participate in plans for the development of the Indus basin by a joint board on the model of the T.V.A. as Mr. Lilienthal had suggested. The next idea was, if the countries would not agree on a joint board, could they agree on a joint plan, and having agreed on a joint plan could each country, as it were, work out its part in that plan? That again fell to the ground for reasons which it is easy to understand. In the existing condition of political tension, nobody was prepared to embark upon a piece of a project costing crores of rupees unless they were quite sure that the other country would do its bit too. The result of that was that the Bank found it extremely difficult to establish anything like a common basis of approach. The precepts of international law were very widely cited by Pakistan, while India fell back upon the obvious need of her population and the fact that it could not be supplied from any other source except the Indus Valley waters.

In the course of 1953 the Bank, in despair of getting agreement, started to put forward its own suggestions, but was careful to do this with full regard to the sovereignty of the disputants. The Bank has always disclaimed any intention of being an arbiter between them, and has tried to avoid giving a judgment. But it has pursued the fixed purpose of getting this Indus basin question so sorted out that the maximum use can be made of available water by each country, and incidentally, so that an extremely dangerous dispute can be adjusted. Towards the end of 1953 the Bank engineers wondered if it would be practicable to enact a kind of judgment of Solomon. Would it be possible to cut the Indus basin baby in two, leaving the Sutlej, Beas and Ravi wholly for India, while assigning

the Chenab, Jhelum and Indus to Pakistan? The Bank engineers at once realized that this would mean an enormous expenditure in bringing the waters of the western rivers to eastern Pakistan canal colonies in order to replace the waters from the eastern rivers, which would go to India. The idea raised a large number of very technical engineering questions. For example, would enough water be left after this tapping of the three western rivers to enable Pakistan to proceed with a number of independent projects for canal irrigation in other parts of the state which she was already contemplating? Moreover, who would pay for the enormous cost of the diversions?

BAD POLITICAL ATMOSPHERE

A good deal of material bearing on these problems was collected during late 1953, and in February 1954 the Bank put forward its proposals on these lines. As bad luck would have it, the political atmosphere at that moment was just about as unfavourable as it possibly could have been for the acceptance of any give-and-take plan. Two very poor monsoons had affected the flow of the Sutlej and the Ravi. Pakistan's cultivators were finding their water supplies reduced. Being human they accused India, just as in the old days of the British Raj everybody in India used to accuse the British of responsibility for every conceivable kind of natural catastrophe or calamity. India replied that she was distributing the available water supplies as fairly as she possibly could, but that the available supplies were in fact very limited owing to the failure of the monsoon. Then Pakistani water engineers wanted to get admission to the Indian head works in order to check the gauges, but difficult questions of sovereignty were involved and the checking was not done. Tension between the two countries rose to almost unprecedented heights, and it was in this very strained situation that the Bank's suggestions came up for examination. India liked the whole idea, although she faced bearing the cost of the diversion of waters from the western rivers to the eastern canals in Pakistan, a bill roughly estimated at something like Rs. 600 millions. The Bank plan would give India water of her own, and it would give her water where she most wanted it.

Pakistan, on the other hand, hesitated a good deal over the plan, wanting more information about the flow of the three western rivers which, owing to the fact that they have not been so extensively developed for irrigation purposes, are not quite so statistically well surveyed as the two main eastern rivers. Pakistan said that she must have an independent survey by a firm of hydrographic consultants to find out, assuming that the diversion of rivers could be made practicable, whether there would be

enough water left for her to undertake certain irrigation developments which were incipient, projected and far in the future. As you can well see, this attitude, however reasonable it was, was very likely to cause misunderstanding at a time when political tension was so high. India maintained that Pakistan had in fact rejected the Bank's suggested plan.

At the very moment when Pakistan was racking her brains over the whole of this question, the first of the big new Indian irrigation projects, the Bhakra-Nangal Channel, was opened by Mr. Nehru in July 1954. Before the opening India gave a categorical undertaking that she would withdraw from the Sutlej for this new project only as much water as Pakistan could replace by using her own new Balloki-Suleimanki link connecting the Ravi with the Sutlej, which Pakistan had opened with very deserved pride amid general congratulation the previous April. While the new channels were actually being filled, there seems in fact to have been some temporary falling off in the water supply to the Sutlej canals. The excitement among the Pakistani cultivators and the concern of the Pakistan Government naturally rose to very great heights, and very bitter complaints were made about breaches of faith. There was a furious press controversy of which the polemics became extremely bitter. Although the water supply to the Sutlej canals was in fact restored up to, and slightly exceeding, its original level after a few days, this occurrence administered another shock to Pakistan, which had not forgotten the five waterless weeks of 1948 to which I have already made reference. Relations between the two countries became seriously strained. Pakistan asserted that India had violated the commitment about continued water supplies given in March 1952 in connexion with the agreement accepting the good offices of the World Bank; India claimed that she had made it quite clear from the start that she was in fact pressing forward with the Bhakra-Nangal project and that, in regulating the flow for newly opened system she had, at great sacrifice to herself, refrained from inflicting any injury on the interests of the Pakistani people.

Although this controversy exercised an unfortunate effect on relations between the two countries, most happily it did not really interfere with the progress towards what we all must hope will be the final solution of the Indus waters question. It became clear very soon after this that Pakistan had not in fact rejected the Bank plan, and it was also admitted by the Bank that Pakistan's desire to obtain an independent opinion on the probable consequences of certain aspects of the proposed diversion of water was not at all unreasonable. Tempers on each side began to cool, and in August, to the great relief of all of us, it was announced that fresh talks would be held in the near future. Subject to certain clarifications, it was agreed to make the Bank's scheme the basis of new discussions.

NEW TERMS OF REFERENCE

In September a fresh delegation from the World Bank came to Delhi and Karachi in connexion with the progress which was being made; some new terms of reference were evolved and it was agreed that the three parties should settle down again to talks. Without commitment on either side (because each sovereign government naturally reserves to itself the right to accept or reject the thing in its final form) the experts from each side and the Bank have again sat down to draft a detailed engineering plan for the utilization of the Indus rivers in accordance with the principles suggested by the Bank. The most encouraging thing perhaps to date is this; by December 10th last year there was sufficient basis of understanding on both sides for India and Pakistan to agree to the Bank's proposals being published. I read an authoritative summary of them which will enable you to see where we have got: "India and Pakistan have agreed to the publication of the proposals formulated by experts of the World Bank in an effort to resolve contending claims which for several years have obstructed any comprehensive plan for developing the greater resources of the six rivers. Under the present terms of reference, technicians of the two countries with the good offices of the Bank, will sit down to produce by next September an agreed engineering plan from the Bank's broad proposals, which are accepted as a basis of discussion subject, of course, to the final approval of their Governments. It is emphasized that the Bank, though free to express its views on any aspect of the matter, is in no way a judge or arbitrator, and its proposals do not imply any opinion on the legal contentions of the parties, nor," it is stated, "are we proposing an arbitrary compromise reached by splitting existing differences, but they are plans based on the Bank's own conception of the problem, aimed at a fair and economic solution. Experts of the Bank note that Indian and Pakistani engineers, operating as a party for the Indus scheme, have in a field trip of 9,000 miles, collected all the necessary data, but have been unable to reach the heart of the problem—a fair division of the waters between the two countries. Both sides have submitted plans; the margin between them remains wide. The Indian plan claimed usable supplies from all the eastern rivers and 7 per cent of the western rivers. Pakistan demanded 70 per cent of the eastern rivers and all the western rivers. In quantitative terms the Indian plan claimed 29 million acres for its own use and allocated 90 million to Pakistan. The respective Pakistani figures were 15.5 million and 102.5 million. The available technical resources are impressive. The proficiency of Indian and Pakistani engineers in canal irrigation technique is unsurpassed, and it is doubtful whether such complete recorded flow data

as exists for the Indus system can be duplicated for any comparable river system in the world. Moreover, the engineers are in accord on such fundamentals as the amount of usable supplies of water, and the sites and capacities of possible storage facilities, and the technical feasibility of proposed engineering work. But two sovereign states are involved, which greatly limits practical planning; problems have to be solved by negotiation and agreement rather than by decision. Owing to present discussions they may also be reluctant to have works regulating their own vital water supplies constructed in another country. It would be unrealistic to ignore the difficulty. The prospects of creating an efficient joint administration are unfavourable, and any comprehensive plan that might be framed must bear this in mind."

The Bank then went on to say: "The Bank's own proposal, now accepted for discussion, provides essentially that the waters of the western rivers be reserved to Pakistan, and the waters of the eastern rivers be reserved to India, subject to a relatively short transition period." They then proceed to summarize the plan for the division into which I will not go, as time is getting short and you all know the details. Briefly, it is the western rivers to Pakistan, the eastern rivers to India, and an arrangement by which the cost of transferring from the western rivers to the eastern canals the flow which is needed to make up what Pakistan will lose to India will be borne by the state which benefits from the work. In other words, if Pakistan loses the existing flow from the eastern rivers and India benefits therefrom, India will on that principle, pay for the cost of these diversions. "An essential test of the comprehensive plan," the Bank remarks, "is its fairness." This proposal provides a fair division of the waters protecting existing irrigation from disturbance and allocating surplus supplies in accordance with the principle of equitable apportionment. The Bank believes that the dispute can be settled on terms by which the supplies given to each country will be increased substantially.

That is the position. The engineers on each side are now busy working out, with the hope of reporting by next September, a plan for constructing the projects, and for financing them with the help of the World Bank, which the division of revenue resources between India and Pakistan will entail. We can only hope that after all these difficult years and after all this controversy the result will be a thoroughly equitable sharing. I need not remind this audience that if it had been possible to arrange for a continuation of the British plan of treating the Indus basin as a whole, and of developing all the available resources regardless of political partition, it might have been a great deal more desirable from the engineering point of view, and would certainly have saved a lot of bitterness.

But that was not possible for the political reasons with which we are all familiar. Failing that kind of unitary development, it seems to me that the suggestion which the Bank has made is one which, with the Bank's money to implement it, offers some kind of a solution, which we all hope will be final, of this extremely vexed and dangerous dispute.

THE RADCLIFFE AWARD

Sir PATRICK SPENS: I thank Professor Rushbrook Williams for quite the best historical summary of the dispute over these waters. When it is printed it is going to be of immense value to all of us. If I may, I would just add a little bit of my own knowledge. Sir Cyril Radcliffe, as he then was, made the boundary awards in July 1947 and no doubt he had to consider in some part the question of the waters. But when the Arbitral Tribunal was set up, over which I presided, one of the main claims that came from India was the claim to be compensated by West Punjab for the great area of the canal colonies which West Pakistan was going to get, and which had been paid for out of the resources of the old undivided Punjab and the Central Government. We had a long and rather bitter reference in regard to that, rather more bitter than most, because the canal colonies which passed to Pakistan had very largely been inhabited by the Sikhs, who had then come into India, and they were determined that that claim should be pressed for all it was worth. Now in the course of that reference, which went on for several days, the question of the waters themselves arose. There was no reference whatever to us about the water rights or the head works or anything else. The Partition Council had retained that in their own hands, and when my colleagues came, as they had to, to decide that Pakistan must make a substantial monetary contribution to India with regard to the great acreage of canal colonies that it was going to get, I remember very well suggesting whether it was not desirable that some order should be made about the continued flow of water. Neither the Attorney-General of India nor the Attorney-General of Pakistan would hear of us saying one single word about the flow of water, but we were invited by both the Attorney-Generals to come to our decision on the basis that there would be no interference whatsoever with the then existing flow of water, and the award which my colleagues made, in which I had no part, they made on that basis. Our awards were published at the end of March 1948. I am going to say nothing more about it except that I was very much upset that almost within a day or two there was a grave interference with the flow of water on the basis of which our awards had been made. I want to add one further thing to what Professor Rushbrook Williams has said. This dispute about the

Indus valley waters has been of the utmost interest to everybody who claims in any sort of way to be an international lawyer, and at the Edinburgh Conference last year, Professor Eagleton of the United States read a paper to the International Law Association at their biennial Conference on the subject of inter-state waters, and pointed out how enormously important it was and mentioning that this question between India and Pakistan was not the only one. There is looming up the question of the Nile; there is already the Jordan; there is also one between Eire and Northern Ireland. They spring up all over the world, and the International Law Association arranged at their last conference that a working party should get down to it and at our next conference, in August of next year, this question will be gone into in very great detail in regard to all the different parts of the world where these disputes arise or may arise. But, of course, the main point of Professor Rushbrook Williams' address as I understand it is that he, and everybody connected with this dispute, are trying to take it out of the hands of the lawyers, and may I say how wise that is, and into the hands of the engineers, because, as he has brought out, there are matters here which really cannot be decided by the best legal opinion in the world.

Dr. BATRA: My contention about the diversion of the waters is that 67 per cent of the entire Indus basin has already gone to Pakistan. Of the remaining 33 per cent, 16 per cent went to the control of the Indian Government and 17 per cent still went to the control of Pakistan, so that 83 per cent of the Indus basin is under the control of the Pakistan Government to do what it likes. The entire dispute which has now been created is about 6.6 per cent of the Indus basin. There are two ways of solving this problem. If one adopts a "no detriment" policy, there has to be some form of an international court of appeal to decide the question of detriment, so that this suggestion should be acceptable to both governments. But unfortunately it is not. So that although Pakistan talks about a "no detriment" plan she is not willing to subscribe to the question of the East Indus waters going before an International Court. Then there is the American solution which is based on "appropriation." On this basis it is quite clear that the state which occupies the land near the head waters is entitled to subtract such waters as are reasonable. Who is going to decide the question of appropriation? How can India be expected to maintain the head works and yet give 50 per cent of the waters to Pakistan with no money to be paid by Pakistan for the working of the head works?

Mr. DEVDEKAR: There was a recommendation which said that three rivers should go to India and three to Pakistan. The latest plan is that

the western rivers should go to Pakistan and the eastern rivers to India. I understand there are only two western rivers and four eastern rivers, including the Jhelum and Chenab. Does it mean, therefore, that the recommendations are now much more in favour of India?

Professor RUSHBROOK WILLIAMS: The actual fact is that the World Bank's plan reserved to Pakistan the entire flow of the Indus, Jhelum, and Chenab, save for a very insignificant portion which is at present used for some very minor irrigation in Kashmir. It assigns to India the entire flow of the Ravi, Beas and Sutlej after the period that will be necessary to enable the link canals to join these three rivers, which I have called for convenience the western rivers, to Pakistan's eastern canals system.

Lord HAILEY said that the six years which he himself had spent as officer in charge of the Jhelum Canal Colony had enabled him to realize how much not only of economic stress but of human issues lay behind the complicated figures of available canal supplies and the policies of distribution of which Professor Rushbrook Williams had dealt with such clarity and such skill. Many of these canal schemes dealt with large areas of land which had long remained uncultivated owing to shortage of rainfall. He asked the audience to realize how inspiring it was to see those areas suddenly become fertile as the canal engineer extended his skill and activity to them; to see the new villages spring up, and a new life opening for the cultivator; and then to imagine what it meant when canal supplies were interrupted or a canal system broke down. It meant deserted villages and stark ruin for those who had staked everything on providing themselves with the means to take up the new lands. To them this was not a political issue—it was life and death.

Lt.-Gen. Sir THOMAS HUTTON: It gives me very great pleasure to propose this vote of thanks to Professor Rushbrook Williams for what we all feel is a brilliant and fair survey. We must be thankful that sentiment and strong feelings have been kept out of the meeting and that he has confined himself to the facts of the situation and the terrible consequences that might ensue. I am neither an engineer nor a lawyer, and so I think it would be wise for me to refrain from any comment on the situation. Members of my family, however, did serve in the Indian service which constructed these canals and so I have had an interest in them as long as I can remember. Everybody in this country would be very distressed if these fertile canal colonies reverted to desert. Personally I believe the engineers, Hindu, Mohammedan or Sikh, would be equally distressed if that should ever come to pass. I ask you all to give a very hearty vote of thanks to our speaker to-day in the usual manner.

Future Indo-British Relations

By B. T. THAKUR

A RECEPTION was held at Over-Seas House on Tuesday, 1st March, with Dr. R. HINGORANI, Vice-Chairman of Council, as host. The guest for the evening was Mr. B. T. THAKUR, General Manager, United Commercial Bank Ltd., Calcutta, who spoke to a large gathering of prominent British and Indian business men on the future of Indo-British relations. Mr. V. A. GRANTHAM, Chairman of the Chartered Bank of India, Australia and China, presided.

Mr. GRANTHAM: When I was asked to take the chair to-day and introduce Mr. Thakur, I confess to a little surprise but very great pleasure. You will understand that we bankers are very critical of each other, and the fact that your Association asked me, as a banker, to introduce him displays, I think, the greatest confidence in Mr. Thakur. But it does give me very great pleasure to be able to stand here as a banker and say of another one what a good chap he is. Mr. Thakur has had an astonishingly fine career in India. Deriving, as he did, from an ancient community of indigenous bankers, he started with the Tata Bank, and then went to the Central Bank of India, where he remained for about twenty years, gaining a great deal of experience. That followed, I may say, after a particularly brilliant university career. At the end of his time with the Central Bank, he became the first Chairman of the United Commercial Bank in 1943, when it started, and in those twelve years Mr. Thakur, under the Chairmanship of one of India's most brilliant industrialists, has made his Bank into one of the leading five banks in India. It is a great achievement and, speaking as the Chairman of the oldest of the Eastern Exchange Banks, I would like to say that we have followed, with great interest and pleasure, the fact that the affairs of the United Commercial Bank have always been conducted on the very highest banking lines, and so we have welcomed enormously its success. Mr. Thakur has also, during all that hard work of his at the Bank, found time to do a great deal of exceedingly good public work. To-night he is going to talk to us about the future of Indo-British relations. He works to-day with his centre as Calcutta, whereas my own spiritual home in India was Bombay, and he will know very well what I mean when I say that, in Bombay at all events, for over two hundred years at least, there has existed the finest and most friendly relationship between Britons and Indians. And indeed during all that time companies managed by British people in Bombay have always been proud and pleased to be able

to have Indian directors on those companies. I myself have never regretted that as a young man, when I first went to India, I had the privilege of being able to sit at the feet of exceedingly able and kindly Indian Chairmen of the companies with which I was connected. To-day we all have moments of anxiety in the natural emergence of nationalism in India. That is to be expected; and I rather think that the Indian capitalists themselves share in a great many of our anxieties. But personally I remain optimistic of the future, and nothing will make me believe that anything can break the old friendly relationship that has existed between British and Indian people. Of the future there is nobody in the commercial world in India more capable of forming judgments, or telling us of what is likely to be the trend of things than Mr. Thakur, and so I have great pleasure in introducing your speaker to you.

Mr. THAKUR, after rapidly surveying the past historical connexion between India and British, emphasized that utmost friendliness between the two countries was vital for the preservation of peace and civilization. There were many men in Britain, he remarked, who vehemently opposed the liberation of India, and feared complete severance in their relations and expropriation of British interests in India after the transfer of power in 1947. These fears had proved completely false. Thanks to India's culture and her idealistic approach to life, in which violence and hatred find no part, and the capacity of the British people to be realistic in life and to adjust their policies as conditions develop, the present relations between the two countries were extremely cordial.

Mr. Thakur referred to the critical world situation and to the several points of conflict. Any one of these, he felt, could ignite the spark resulting in world conflagration. He, therefore, appealed to men of goodwill and clear thinking in the two countries to assist in the further growth of their common outlook on world problems, and in the enlargement of the friendship that exists between them to-day. There might be occasions when differences in the views of the two countries could create some strain, but he had faith in the sanity of the leaders not to overstep the limits of differences.

In the ultimate analysis, human relations, whether internal or external, were motivated by a few broad principles of moral values, sentiments, traditions, ways of life and economic considerations. But the principal cause of conflict was generally the economic dissatisfaction of the poorer sections of the community and of countries dissatisfied with their existing conditions, or the fear of being deprived of the means which had made higher living possible in the case of richer people and of economically advanced countries. But the tremendous scientific and technological

advances had now made it possible to assist the poorer people and backward countries and to raise their standard of living without any impairment in the conditions of existence of the richer people and richer countries. Mr. Thakur said he was happy that the world to-day realized that such fulfilment through international financial and industrial co-operation was possible. In support of his views he referred to the programme of American economic aid, and the co-operation of the Commonwealth countries in the shape of the Colombo Plan. He also referred to the participation of American and British financiers with Indians in starting the new Investment and Credit Corporation in India, and even sparing a first rate British banker, Mr. Beale, to take charge of it, to show that international economic co-operation was increasing. The World Bank's functions and its latest decision to sponsor a \$100m. International Financial Corporation also confirmed this rising realization of the wisdom of international financial co-operation. Such co-operation would greatly stimulate work for enduring Indo-British friendship, and even enlarge the scope for joint efforts to improve international understanding and promote better world policies. But this realization, he observed, was still in the minds of thinking men only and had not as yet seeped deep into the minds of the masses, or even of many business men, who continued to live and think on the old lines of privileges and preferences. This attitude must change if they wanted a safer and better world. Backward people must realize on their part that improvement could not be achieved overnight. It required sacrifices, time and planning—and, what was still more important, it required the co-operation of richer people and richer countries in investment and capital. Political freedom in itself was not sufficient to achieve economic progress or better standards of living.

Mr. Thakur felt that we must ignore extreme reactionaries of the right in Britain, or for that matter in the Commonwealth and in other parts of the world, for whom it was too late to learn from the lessons of history, and of the last two tragic wars, and who would continue to persist in their ideas of privileges coupled with race and colour arrogance. He also thought we must simultaneously ignore the extreme left in India and elsewhere, who either through ignorance or impatience or even as a result of suffering, had lost all capacity to think clearly except in terms of immediate and sudden destruction of the existing pattern of society whether through legislation or violence. Mr. Thakur stressed that ordinary men and women in Britain and India should try to understand the fundamental forces of life which were very active to-day, and which, unless properly regulated and correctly directed, could blow up the world, leaving perhaps no man alive.

A BANKER'S ATTITUDE

Mr. Thakur asserted that a banker's attitude to life was objective and not subjective. The banker developed a keener perception of gains and losses whether in money or other factors of life. There was increased realization now on the part of the bankers of the world that greater investment aid in the development of capital works in the East was essential for the preservation of peace. Mr. Thakur, therefore, emphasized that bankers all over the world must give a new slogan to the people of the world, namely, "Peace through savings and investments." And because India was the largest country, with nearly 400 million people, in the free democratic non-totalitarian world, it was vital that her economic strength should be speedily enhanced. Britain, with her experience, and financial machinery, could if necessary act as an intermediary between India and other foreign countries with surplus income, and thus materially assist in this purpose. On India's part, Mr. Thakur advised his countrymen to be a little more realistic in their attitudes, policies and programmes, and a little less idealistic. Britain should also be a little more conscious of the sentiments and sufferings of the backward peoples.

One often heard that Britain had lost her economic vitality. This was not only loose and irresponsible talk, but a deliberate and malicious attempt to belittle her greatness in the economic field. But to keep up her eminence in the industrial field, British business men must continuously study the changing conditions of trade and the need for better production efficiency. Some of the industrial installations required to be modernized to reduce production costs. Perhaps in the future, European countries would have to put greater emphasis on the production of heavy goods because newly liberated Eastern countries wanted to build up their own industries for producing consumer goods. Britain, with advantage, could survey new fields for economic service. Britain was the largest underwriter in the field of insurance. She could, he thought, profitably explore the possibility of enlarging this underwriting business in the field of international investments.

Mr. Thakur urged the leaders of the world constantly to remind their people that democracy and international peace were impossible without international co-operation in raising the standards of living of backward people. They must give continuous and wide publicity to the banker's prescription of peace through savings and investments.

Bankers were often maligned as supporters of large, wasteful military expenditure in national budgets and even as instigators of wars. "From my talks with bankers all over the world I clearly see," said Mr. Thakur, "that they have fully realized the futility of war as a solution for any

human problem.” War destroyed vast amounts of savings and capital laboriously built up through sacrifice over large periods, and involved heavy taxes both for the victor and the vanquished. If even a portion of such expenditure were diverted to the acceleration of international economic progress, bankers felt that there would be better returns on investments, less taxation, and more chances of peace.

In conclusion, Mr. Thakur remarked that the trouble in the world to-day was that there had not been proper understanding about the actions and reactions of the various forces by the common man who, through his vote, controlled governments. Through his ignorance of world realities, the common man was unable correctly to use his judgment in exercising the wide power which the vote gave him. It was therefore most important added Mr. Thakur, that we take steps to remove this ignorance. One such step which could be taken without great difficulty was to initiate mutual friendly societies in our two countries. Mr. Thakur recommended the formation of a Friends of India Society in Britain and a Friends of Britain Society in India, through which men and women of goodwill in the two countries could develop greater respect and friendliness for each other.

DISCUSSION

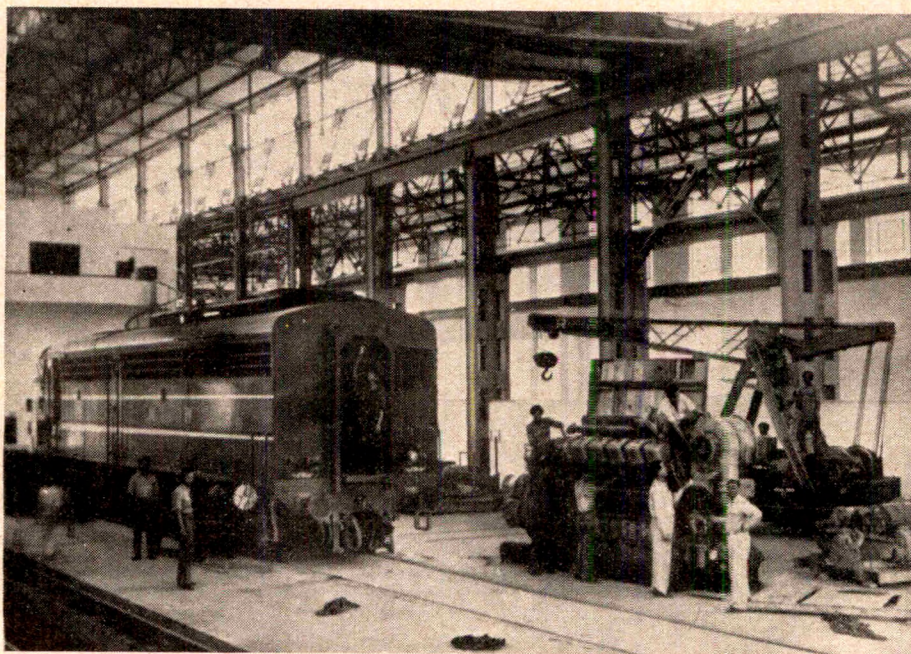
Mr. C. G. HANCOCK: Mr. Thakur spoke of economic co-operation between Great Britain and India. I would like to ask him whether he does not think it would be promoted by the Indian Government making electricity from atomic power with a view to giving India greater prosperity.

Mr. B. T. THAKUR: We should welcome any kind of aid, whether atomic energy or otherwise. After all, this is the most recent form of providing energy for increasing economic potential, and providing power for industries. But whether we can afford to pay the price I am not able to say. Probably we should be very happy if Britain could give us help in that direction.

As there were no further questions, Mr. Grantham then thanked Mr. Thakur for an extremely interesting and able address. Boiled down to its lowest common denominator, Mr. Grantham said, an army marches on its stomach, and unless people have food inside them they are not going to be at peace with one another. So we start from that point, and we find that we have got economic interests in common. I have thought myself perhaps that the peace of the world depends too much on

states of mind in high places. Mr. Thakur, I am glad to see, says that it is the common men in each country who have got to know each other. Somewhere between the two the truth lies. In any event, if people like Mr. Thakur in India to-day can get up and tell us they want our friendship and co-operation, then I think there is every future for peace and prosperity between Britain and India.

Sir JOHN WOODHEAD, Chairman of Council, thanked Mr. Grantham for so ably taking the chair, and also asked those present to accord a hearty vote of thanks to Dr. R. Hingorani for providing the tea.



SERVICING ENGINES AT THE NEWLY-CONSTRUCTED
WORKSHOPS IN KARACHI

Malaya's New Technical College

By WARNER VANTER

THE FORMAL OPENING of the new Federal Technical College in Gurney Road, Kuala Lumpur, on March 1 marked the realization of a 14-year-old ambition of the College Advisory Committee and the Education Department.

In 1941 schemes for enhancing technical education were finalized and a site acquired for new premises. At the same time, it was decided that the standard of training thus far attained justified calling the Technical School a College. The war intervened. There were lamentable losses of equipment and books to be faced when the College re-opened in September 1946 but the following year there was postwar normalcy in regard to intake of students.

Two years later those who had set their hearts on a Technical College with premises worthy of present and future developments in the Federation were rewarded. The U.K. Government, in the course of its policy of aiding technical education in the Commonwealth, offered Malaya \$4,850,000 from Colonial Development and Welfare Funds to meet the capital cost of building the desired college.

Since then, under the Colombo Plan, the Government of Australia has donated equipment worth about \$60,000 for the electricity laboratories, and more has been promised for the sections dealing with mechanics.

Though the new College now officially opened and two plaques commemorating the event were unveiled (one recording Australia's contribution) it is plain even to the passer-by that the entire scheme has yet to be completed.

The process of building entails a seeming untidy array of material and implements which is inclined to depress those who are impatient to see the architect's plan an accomplished fact. Fortunately builders also have the art of being able virtually to spirit away the "clutter" when "finis" can be written to their labours—and labours they are in the Malayan sun—but a few more months must elapse before these fine College buildings covering 43 acres are finally completed.

The six-block hostel was opened in 1953 and has accommodation for 500 students, with 300 in residence now. First-year students share a room and second and third-year men have their own quarters.

The blocks are designed for maximum ventilation space between and incorporate the latest ideas for minimizing glare and ensuring a reasonably cool interior even during the heat of the day. There are also adequate, modern ablution rooms.

The dining hall is in two sections in order to cater for differing racial outlook but there is much friendly intermingling and no rigid observance of the two types of facilities—which the visitor may note with pleasant surprise.

This hall, the recreation hall above it and the ample playing fields—along with other opportunities for a full corporate life within the College (all students are boarders)—are the best that the financial means allow and appear to be appropriately appreciated by the students.

The building of the lecture halls (of which there are three), laboratories (catering for 10 branches of study) and drawing offices was started in 1953 and these are now completed, enabling the operation of a full instruction programme and the vacating of the old High Street premises, which are now a Secondary Modern School.

Having reached this stage it was felt that the correct impetus to the embarking on a new and more full life by the College should be given now by the customary formal declaration of the opening of the premises, though the administrative block and the general workshop have yet to be completed and the arrival of a certain amount of technical equipment is still awaited.

Thus in reality it is three imposing “academic” blocks which have been officially inaugurated. Viewed both from within and without, it is obvious that the education authorities and the Public Works Department (responsible for design and building control) have between them achieved the aim of erecting a technical college on a par with any in the West and which is one of the biggest in South-East Asia, with standards set accordingly—the College Diploma is already held in high regard.

The Principal is Mr. E. Buckley, BE (NUI), AMICE, AMISTRUCTE. His Deputy is Mr. H. A. K. Hair, BA (Madras), AMIEE. They have a staff of 15 instructors (all Asians), which is augmented by a number of part-time teachers (of all races) from Government Departments and private firms.

Mr. Buckley told me that the training side of the College could cope with up to 750 students but it will be some time before the need to do so will arise despite the great increase in the desire for technical knowledge in Malaya in recent years. More are applying to be admitted as private students but priority is given to scholarship holders and technical apprentices from Government Departments and business concerns.

This Kuala Lumpur College is the only one in the Federation and certain students also attend from the Colony of Singapore, Brunei and Sarawak. Among Federal entrants are Army cadets taking technical commissions and Police inspectors, who study automobile engineering.

The design of the College is such as to enable the imparting of technical education at all levels up to professional standard and the labs embrace

physics, chemistry, metallurgy, telecommunications and radio, electrical engineering and measurements, materials and concrete, soils mechanics, hydraulics and water-works and heat engines.

Qualification for entry to the College is possession of at least School Certificate Grade II, with credits in English and elementary maths. A credit in science gains preference. Candidates must be 16 years of age but not 21 on July 1 on the year of entry. Where necessary, students are aided financially in various ways. Judging from the demand for this type of education there should be no dearth of skilled technicians in the Malaya of To-morrow.

Since we are entitled to this satisfactory conclusion it is interesting to recall the beginnings of the present Technical College. The year was 1925 and the month October—according to reliable sources—when the Public Works Departmental Technical School was started in Brickfields Road, Kuala Lumpur. Apprentices attended from the PWD, Way and Works (Railways), Signal and Telegraph Dept. (Railways) and, later, the Survey Dept.

The Telecommunications Dept. (when part of the Posts and Telegraph Dept.), the Electrical Dept. and the Mechanical Dept. of the Railways started their own “monotechnic departmental schools,” so there were four centres of instruction in Kuala Lumpur alone.

This was both expensive and inefficient and in 1927 a unified technical school was recommenced—in a Report by Messrs. Coales, Watson and Worley—to train both for Government and private and engineering. But various difficulties caused the postponement of the scheme. Though the recommendations of the Report were not actually implemented they did pave the way in 1931 for the transfer of the Brickfields school to the premises in High Street which have been vacated recently. At the same time the three monotechnic schools were absorbed into the Technical School proper. And in 1953 fee-paying private students were admitted.

Deducting the 14 years since 1941, the sponsors of technical education in the Federation can well claim to have come a long way in the remaining 16 years since the Brickfields school was started in 1925. Our “technical-minded” youths now and in the future will have cause to bless those who would not have their plans put aside and also the Colonial Development and Welfare Fund, which enabled the new “Tech” to be one of the best of its kind.

Henry Highfield

A TRIBUTE by the Rev. JAMES CARTMAN

PRINCIPAL WESLEY COLLEGE COLOMBO, 1944-49

CEYLON has lost an outstanding figure in the passing of the Rev. Henry Highfield, who first went to Ceylon in 1895. On his arrival he became the seventh Principal of the Wesley College in Colombo, which was at that time accommodated in a makeshift building in the Pettah, and immediately bent his energy to obtaining more worthy and suitable quarters. He was encouraged in his venture by the Wesleyan Methodist Missionary Society in England, who promised him 5 Rs. for every Rupee collected in Ceylon. As the result of his nation-wide campaign to collect funds, the new premises were opened in February, 1907, by the then Governor, Sir Henry Blake, and the magnificent building is an enduring monument to his untiring and selfless devotion.

In the building of his own creation and with this staff of his own choice, Highfield spent long years influencing for good hundreds of students, irrespective of race or creed: Sinhalese, Tamils, Muslims and Burghers. He made available at Wesley College, with its strong Christian foundations, a sound public school education, and the years have shewn, beyond question, that Highfield, along with several of his contemporary Schoolmasters, prepared the men who to-day in every walk of life are shouldering responsibility in the new Dominion of Ceylon.

When Independent Ceylon selected her first three Ambassadors and sent them to England, the United States of America and India, they were all three Highfield's students. One of them is Sir Oliver Goonetilleke, GCMG, KCVO, KBE, the Governor General of Ceylon, the first Ceylonese to occupy that high office. The second, Sir G. Claude S. Corea, KBE, is now the High Commissioner for Ceylon in the United Kingdom, under whose direction it is my privilege to work with Ceylonese students in the United Kingdom; the third, the Hon. Mr. M. W. H. de Silva, QC, BA, is now in retirement.

Highfield's name will always be treasured in Ceylon. Like Arnold of Rugby, he will ever be remembered as Highfield of Wesley.

" See how great a flame aspires,
Kindled by a spark of love."

British business interests in Indonesia

ON FRIDAY, 14th January, 1955, the Indonesia Association (a body representative of all British business interests in Indonesia, e.g. plantations, merchant houses, oil, shipping) gave a luncheon in honour of H.E. the Indonesian Ambassador, Professor R. Supomo, at the Savoy Hotel, London.

The Chairman of the Indonesia Association, Mr. R. G. MACKINDOE, welcomed Professor Supomo, and declared that the Association was always anxious to be of assistance.

Many members, he said, knew Indonesia well and all of them had the prosperity and welfare of the people at heart, yet some of them had misgivings regarding the position of British interests in Indonesia to-day. Some members, as Directors of companies and responsible to tens of thousands of investors, were finding it difficult to decide how to protect the capital entrusted to them, while the investors themselves felt that their investments were not being given the encouragement and security offered by other countries.

He claimed that the Association recognized and sympathized with the problems confronting Indonesia and the aspirations of her people, and were seeking a *modus vivendi* whereby Indonesian and Western enterprise could exist side by side.

To this end, he asked the Ambassador to consider whether it would be beneficial to have a Committee of Association members, which could have periodic meetings with Embassy officials to discuss the Association's problems and, if possible, make recommendations which, with the Ambassador's approval, could be forwarded for the consideration of the authorities in Djakarta.

The AMBASSADOR then delivered the following address: First of all, I should like to thank you very much indeed for inviting us to this luncheon to-day—it provides us with a wonderful opportunity of making each other's acquaintance and exchanging opinions.

I have listened with the utmost attention to your speech, Mr. Chairman, and greatly appreciate the frank way in which you have spoken. I fully understand your anxiety for the security of foreign investments in Indonesia, and I appreciate your grasp of the problems confronting my country at the present time. I am very happy to know that you are aware of the changing conditions there and are obviously willing to make

allowances for them. It has long been the cry of my government that a large number of foreign concerns have shown a marked reluctance to adapt themselves to prevailing conditions and it is, therefore, all the more encouraging to listen to opinions such as those just expressed by you. I realize, of course, that potential investors require encouragement and, above all, assurances of security—and I will certainly bring your views to the attention of my government.

As you so rightly said, Mr. Chairman, this is not the place for a detailed discussion or minute consideration of these problems—nevertheless, it seems to me that it would be a good thing to stress, once again, some of the trends in Indonesia's economic policy.

As you all know, since the declaration of our independence, our task has been one of reconstruction, and our aim is to give full significance to our national sovereignty. In the field of economics this means the transition from the former colonial system to one based on a national plan. It means that the natural resources of our country should, in the first place, be used to promote the material and spiritual well-being of the Indonesian people, and that all our efforts should be bent towards the establishment of a sound national economy. Here, may I say that it gave me great pleasure to hear you speak of your affection and good wishes for my people. Just consider, however, that most of our import and export trade, and our industry, is in foreign hands. We would be less than human did we not wish to dispose of our natural resources ourselves, and for the benefit of our own people. In our financial and economic agreement with the Netherlands it is expressly stipulated that the general economic policy to be pursued by Indonesia shall be primarily focused on the strengthening of our community as a whole—that is to ensure that the interests and progress of the Indonesian people shall be served to the full by creating a maximum of effective purchasing power and raising the general standard of living. This principle is constantly before us and will guide any government which may come to power in my country.

This does not, of course, preclude investment of foreign capital in Indonesia—every government from the Declaration of Independence up to the present time has realized that Indonesia, like other South East Asian countries, still needs foreign capital—and we also welcome foreign technical assistance and economic aid. The government has consistently studied the question of foreign investment; the nature of foreign enterprises and the terms under which they should operate; the possibilities of remitting profits and of participation in management. It is our aim to encourage existing foreign concerns to give Indonesian personnel every training facility up to executive and administrative rank—and also to

provide an opening for Indonesian capital. I can only reiterate that it is the constant policy of each and every government to welcome foreign capital investment to aid us in our great task of national reconstruction.

Formerly, foreign concerns in Indonesia operated within a definite political and legal framework established by the colonial government. Since present day policy in the young independent countries, like Indonesia, is to play for a national economy—as opposed to the dependent economy of colonial days—so foreign investors have to adapt themselves to new conditions.

In February, 1954, our Minister of Finance stated in the Indonesian Parliament that foreign capital would be welcome on condition that it was used in co-operation with Indonesian nationals and government agencies. He also recognized the need for employing foreign nationals in those capacities which could not be filled by Indonesians. He went on to say that foreign enterprise would always be given assistance in obtaining land, and that every effort would be made to ensure effective security measures. Indeed, as the Director General of the Foreign Economic Relations Bureau in Djakarta stated last month—the extent to which foreign capital investment is appreciated by the Indonesian people depends on whether or not that capital is used in the interests of the national economy.

Again, on August 17th, 1954, His Excellency President Sukarno—in his speech commemorating the 9th anniversary of the Declaration of Independence—said that in view of the reconstruction of our vast and truly rich country we are more than willing to employ foreign capital and labour—provided that they have the necessary good will to work together with us. Such co-operation, he continued, must surely be to the advantage of all concerned. The President said that it was only reasonable to expect such foreign concerns to co-operate in accordance with the principles laid down under the new national law, and it is also no more than fair that this national law should have the interests of our own people at heart.

I know very well that you have been anxiously awaiting a firm declaration of government policy on foreign investments. May I repeat that I will relay your wishes and your feelings in general to my Government. I would point out, however, that the drafting of a regulation on foreign capital investment has been expedited, and we expect the completion of the draft within a short time.

In this connexion, I should like to refer to what the Prime Minister of the Colombo Powers said at the Bogor Conference a week or so ago—namely, that the economic development of the Asian countries, which is so vital to the health and well being of their peoples, requires a planned

approach to ensure that their natural resources are used with maximum effect. An essential prerequisite of such an approach is full knowledge of these resources entailing detailed surveys—particularly of mineral deposits. It is in this sphere that co-operation in the supply of technical personnel and equipment would be greatly appreciated, but outside help is not much good if the countries concerned cannot develop their own resources. Self-help and self-reliance is our need, and only by enduring present austerity can we hope for future prosperity.

It is becoming increasingly apparent that an economic balance of power must be achieved in South East Asia, and to this end private investment and enterprise can still play a useful and perhaps vital part.

I should say that what is needed is a new partnership in Asia—between national government and private enterprise. In the past, relations between Asia and the West appear to have been characterized by Kipling's well-known assertion that East is East, West is West and never the twain shall meet.

You will no doubt agree, however, that nowadays Asia and the West need each other. The basic condition for any entente is real mutual understanding founded on true reciprocity and equality. With such a foundation, economic relations between East and West will surely be mutually beneficial and more than satisfactory.

Your idea of a committee is an excellent one, and seems to me to be a very good starting point for closer co-operation between us. Referring to your suggestion for a panel from our side, I should like to point out that there is an Economic Department at the Embassy—the members of which will always be glad to meet you at any time.

May I thank you all once more for your kindness, past and present—and you, Mr. Chairman, for your frankness and very generous offer of help. All this I deeply appreciate, and for my part shall do everything in my power to realize your hopes—and mine—for a better understanding and closer collaboration between us.

Bogor—A Profile

WHAT KIND of a place is Bogor? This question must have been in the minds of many lately, for Bogor, an ancient Indonesian city, unknown except possibly as a name on a map to the majority of people in this country, recently became the focus of world-wide attention when it was chosen as the site of the momentous two-day conference of the Five Asian Prime Ministers.

Surrounded by blue mountains and some 35 miles from Djakarta, the capital of the Republic of Indonesia, Bogor is a gracious city with its beautiful gardens, its palace, its schools, its famous scientific institutions and its hospitals.

Primarily a residential and scientific centre, it is an ideal site for conferences. Situated about 870 feet above sea level, it escapes the steamy humidity of the coast and has a very pleasant climate, marred only by the rather frequent rainstorms. The present population numbers about 124,000, with a population density in the surrounding area of 500 to 750 per square mile. Each day a number of the inhabitants travel by road or rail to Djakarta, and within the city adequate transport is being provided.

The town boasts six large hotels, several cinemas, swimming pools and a hot mineral spring bath at Tjiseuseupan, six miles out of the city. Just half an hour's drive out in the direction of Bandung, there is the picturesque and popular mountain resort of Puntjak. To the south of the city rises the peak of Mt. Salak, while off to the south-east are the twin peaks of Pangrango and Gedeh, both over 10,000 feet above sea level. Salak and Pangrango are both active volcanoes, the soil all round the city being of obvious volcano origin.

On the plains to the north are rubber and tea plantations. Rice is also grown in the neighbourhood. Most of this is cultivated by the wet-field process, although there are some dry fields on the mountain slopes. All these owe much to the work of Bogor's well-known scientific institutions, including the General Agricultural Experimental Station (the largest of its kind in the whole of Indonesia), the Forestry Experimental Station, the Laboratory for Chemical Research and the Rubber Research Institute. The activities of these institutes have led to great improvements in the fields they cover, and while they are most particularly looked to for guidance in agricultural practice in Indonesia, they have also an international reputation.

Also of great importance to agriculture are the Botanical Gardens which are known to botanists all over the world. These gardens cover about 275 acres of land and include a herbarium, a zoological museum, a scientific library and a laboratory.

The gardens were laid out in 1817 for the purpose of growing and studying various types of Indonesian plants and trees. In 1827, they came under the supervision of the Dutch Governor-General's aide-de-camp, a man who knew nothing of gardening, and for a period they were neglected. However, thanks to the efforts of a scientist named Treub, the garden was eventually reorganized and expanded, until it now contains about 10,000 species of trees and 500,000 species of plants, the latter including some particularly beautiful orchids. In 1860 another branch of the Garden was established at a higher elevation to accommodate plants requiring a colder climate. This Garden which covers 200 acres is situated on the volcanic slopes of the Pangrango and Gedeh mountains at Tjibodas, about 27 miles south-east of Bogor.

The library attached to the gardens was started in 1842. It now has a collection of about 60,000 volumes, some of them extremely valuable. Next to be established was the laboratory which was opened in 1884 as a research station where foreign scientists could study tropical plants. The museum which now has a collection of over three million zoological specimens was opened in 1894.

Although Bogor is not primarily an industrial or a commercial centre, a certain amount of manufacturing is carried on there, the largest concern being the Goodyear tyre factory. In addition, there are nine textile mills and several tapioca mills. Home industries include leather tanning, toymaking and furniture manufacture.

Most imposing of Bogor's buildings is the President's Palace where the conference was held. The original palace was built by Governor-General van Imhoff, who held office from 1743-50, on some property granted him by the Dutch Administration and which he named "Buitenzorg," a Dutch equivalent of "Sans Souci." Intended originally as a summer resort, it became eventually his permanent residence. It is reported to have been built on the plan of Blenheim Palace near Oxford, home of the Duke of Marlborough. The palace was heavily damaged in an earthquake and was rebuilt when the English took over the administration of Java in 1811. Under the British Governor-General, Sir Stamford Raffles, the gardens, which were of the old-fashioned Dutch style, acquired an English touch.

There are many historical relics in Bogor, which was the capital of the old West Java Kingdom from the 12th to the 16th centuries. At Batu Tulis, two miles out of the city, may still be seen the inscribed stone, now an archaeological relic, which tells of the feats of Prabu Radja Purana, founder of the West Java Kingdom, which successfully resisted all attempts of Madjapahit to conquer it, and which in fact was one of the influences which ultimately led to the downfall of the Madjapahit Empire.

Pakistan's Greatest Irrigation Project Since Independence

WHILE THE IDES of March was a day of ill-omen for the Roman Emperor Julius Caesar, the 15th of March 1955 was a day of great promise and rejoicing for the people of Pakistan, especially the people of Lower Sind. For it was the day on which the great Kotri Barrage in the Province of Sind was opened by H.E. the Governor-General of Pakistan, Mr. Ghulam Mohammed. It marked the completion of Pakistan's greatest irrigation project since Independence and gave the world one of its newest and greatest irrigation achievements.

Preliminary work on this project began in 1946 but it was not until late 1949 that work on the Barrage proper commenced. For six long years men and machines have toiled in the burning sun of the Sind Desert to reclaim this barren region and to build this giant structure which will harness the wayward Indus river and lovingly apportion its life-giving waters over 2,800,000 acres of hungry land.

The Barrage rises some $84\frac{1}{2}$ feet above its rock-bottom foundation. Beneath sprawls the River tamed and tractable, ready to do man's bidding and enfolded by the 3,000 feet steel and stone-faced concrete arms of its forty-four 60-foot span bays. A 20-foot highway with a foot-path on each side stretches along its entire length. Like its sister Barrage, the Sukkur Barrage higher up the Indus Valley the Kotri Barrage is expected to bring tremendous benefits to the three districts of Hyderabad, Thatta and Dadu in Lower Sind. Of the more than $2\frac{3}{4}$ million acres it commands, 1,700,000 are virgin land. One third of the total command area has been reserved for landless peasants, refugees from across the borders of India. Forests will cover 73,000 acres and the out-turn of crops is expected to increase from 170,000 to 750,000 tons per year. Water from feeder canals is to form a large lake 20 miles in length and 45 square miles in area, which will provide a valuable water reserve for Karachi and afford facilities for the provision of hydro-electric power. The Barrage has also been provided with a lock channel which will allow of the easy passage of river traffic for a part of the year. Even the fish have not been forgotten, for in this mammoth project fish ladders have been fitted to the Barrage to enable the valuable "Palla" fish to move upstream without difficulty.

After the opening ceremony it was announced by the Chief Minister of Sind Mr. A. Khuro that the Barrage was to be re-named the "Ghulam Mohammed Barrage" after Pakistan's highly respected Governor-General and in appreciation of the great services he has rendered to the economic stability of Pakistan and the welfare of its people.

Nanyang University

Sir JOHN NICOLL, the Governor of Singapore, in the course of his recent budget speech in the Legislative Council, referring to the new Nanyang University said: "I take this opportunity to extend a warm welcome to the new university and to Dr. Lin Yutang. I am confident that the Nanyang University will fit in with our educational system and turn out good Malaysians well qualified to take a leading part in developing a Malayan nation devoted to its country."

The Colonial Secretary, Mr. W. A. C. GOODE, visited the University site in Jurong in November to bestow the final blessing of the Singapore Government.

Mr. Tan Lark Sye and Mr. Lien Ying Chcw, two of the chief sponsors of the University pointed out to Mr. Goode the sites where multi-million dollar schemes are in progress.

Dr. Lin Yutang, the Chancellor, Dr. S. I. Hsuing, Dean of the Arts Faculty, and Mr. Canning Young, Professor of Architecture, and resident architect, told him of their plans for making the university attractive.

Mr. Goode asked what provision was being made for playing fields. Mr. Lien told him that several acres were being levelled off and planted with grass.

Other projects Mr. Goode was told about were an auditorium and stage, an amphitheatre for Chinese plays and a pool in front of the library to give it a "Taj Mahal" effect.

When Mr. Goode heard that special bus services were being arranged because the University was so far out of town he commented: "You're not so far away. The town will be here in 10 years."

Plans for 22 buildings for the Nanyang University have been approved and work on many of them has started on a 500-acre site at Jurong, Singapore.

The three main buildings will house the library and offices, the Faculty of Arts and a hostel for about 200 students.

The other buildings are the Chancellor's residence, four houses for the deans, and 14 for other staff.

Plans are now being drawn up for a Science block and a Commerce block. They are expected to be completed shortly after the others.

The Chancellor of the university, Dr. Lin Yutang has announced that Dr. T. Y. Hu, senior economics officer of the United Nations Economic Commission for Asia and the Far East, would arrive in Singapore on November 13 to advise at a dean's conference.

Dr. Hu, author of *International Price System* is expected to be appointed Dean of Science. He is at present on field duty for E.C.A.F.E. in Bangkok.

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The Indian and Pakistan Armies of To-day

By Field-Marshal Sir JOHN HARDING,
GCB, CBE, DSO, MC

AN ADDRESS on the Indian and Pakistan Armies of To-day was given by Field-Marshal Sir JOHN HARDING, Chief of the Imperial General Staff, to a crowded combined meeting of the East India Association, the Pakistan Society and the Over-Seas League at Over-Seas House on Thursday, 24th March, 1955. General Sir Rob Lockhart, KCB, CIE, MC, presided.

Sir ROB LOCKHART in his introductory remarks spoke of the splendid record held by Field-Marshal Sir John Harding both in war as a Commander, and in peace as Chief of the Imperial General Staff. "He is indefatigable," said the Chairman, "in getting about the world and studying the army's problems on the spot. On behalf of the East India Association, the Pakistan Society and the Over-Seas League, I would like to extend to him a very warm welcome and assure him that we are looking forward, with the greatest interest, to hearing his impressions of the two armies which he has so recently visited, and with which so many of us here this afternoon have very close connexions. I would also like to say how greatly honoured I feel at having been asked to take the Chair on this occasion." The Chairman said he had received a message from His Excellency the High Commissioner for Pakistan expressing his regret that owing to his departure for the continent, he was unable to attend the meeting.

Field-Marshal Sir JOHN HARDING: Mr. Chairman, Ladies and Gentlemen, thank you very much for your kind remarks and for your warm welcome. It is a real pleasure to me to have been given this opportunity to address a joint meeting of the East India Association, the Pakistan Society and the Over-Seas League, about my recent visit to India and Pakistan, but I must confess that I speak with some diffidence for two reasons. First, my visit to both countries was comparatively short, and although I went to a great many places, saw a great deal, and met and talked with a large number of people, during such a brief visit there is much that I did not see and could not know about. Secondly, there must be in this audience a number of people who know far more about the Pakistan and Indian armies than I do.

Having seen service in India and Pakistan for about six years after the first World War and again from 1939-1940, and having been very closely associated with Indian and Pakistani troops in both World wars, it was a matter of great interest and joy to me when I received an invitation to visit Pakistan and India and to see something of their armies as constituted at present. More especially as during my tour of duty as Chief of the Imperial General Staff I have tried, to the best of my ability, to focus as much attention as I can on the closest co-operation and good comradeship between the various armies, and indeed the armed forces, of the Commonwealth countries, for I believe that to be a very important business. I would not mind if they altered my title of Chief of the Imperial General Staff to, perhaps, Chief of the Commonwealth General Staff, but that is unconstitutional and cannot be contemplated. However, I do regard it as of the greatest importance that whoever holds my appointment should keep in the very closest touch with the Commanders-in-Chief and Chiefs of Staff of the other members of the Commonwealth. I would like to take this opportunity of expressing my sincere thanks, deep appreciation and gratitude to both India and Pakistan, and to their respective armies, for having invited me to make this trip and for the warm welcome and bountiful hospitality I received wherever I went.

VISIT TO PAKISTAN

I propose to start by telling you something of my visit to Pakistan because I went there first. But in all I say this afternoon, and because of the fact that my visit was a very brief one, I would like to stress that my comments must be, and are, much more in the nature of impressions than of planned, carefully considered conclusions. However, I shall give you those impressions as frankly and as clearly as I can.

At Karachi I was most kindly put up by the Governor-General, and had an opportunity of meeting the Prime Minister, Mr. Mohammad Ali, the Home Minister, General Iskander Mirza, the Minister of Finance, Mr. Chowdhury Mohammad, as well as a great many other high-ranking officers and officials. I also had the privilege and pleasure of being entertained to lunch by the Governor-General, and it was very pleasing and most impressive to see the Governor-General's Bodyguard, resplendent in their full dress, on duty both in the reception room and dining room. The Governor-General himself was very kind and generous in his remarks and in his welcome, so it was a useful day I spent at Karachi getting the feel of things at the seat of Government. I then went on to Quetta, where I had been invited to speak to the staff and students of the Staff College. The last time I was in Quetta was 34 years ago as a junior officer. I was

received at the airfield by General Mohammad Latif Khan, who is the first Pakistan Commandant of the Staff College, and the guard of honour was supplied by the 7/16th Punjab Regiment, who were very smartly turned out and wonderfully steady on parade. They were fine-looking soldiers with a good martial bearing whose drill was excellent. I do not think I have ever seen a better guard of honour anywhere. The Staff College itself was very interesting and impressive indeed. I was shown all the old records and pictures, including the names of those famous soldiers who had attended there as students, people like Field-Marshal Sir Claude Auchinleck, Field-Marshal Sir William Slim, and others who are well known to you. All of this was shown to me with great pride, and I have no doubt whatever that the greatest value is attached there, as everywhere else, to the traditions, practices, principles and ideals that were built up in the past. I addressed the staff and students on the development of armies to meet the needs of modern war, and they were most attentive. After lunch in the mess I was able to meet all the staff and talk to a cross-section of the students. Combined with the Staff College there is a Tactical School, so I was able to meet there rather a wider cross-section of army officers than would have been the case if it was purely a Staff College. It was altogether a very encouraging and inspiring day. Not only were there instructors and students from the Pakistan army present but also from the United Kingdom, Australian and American armies, and I also met two Egyptian army officer students, and my impression from such a brief visit was that the higher education of the officers of the Pakistan army is being well taken care of.

From Quetta we went to Rawalpindi, where we were met by the Commander-in-Chief, now Minister of Defence as well, General Ayub Khan, whom I had now got to know well and for whom I have a great admiration and affection. I feel quite certain that under his leadership the Pakistan army will go forward well into the future. The primary object of my visit was to attend a large-scale exercise which General Ayub Khan had arranged to take place in November. It was on an ambitious scale and involved operations between a corps of two divisions, plus some armour, fighting against a division with more armour in a manoeuvre battle over a very good area for such training. The corps headquarters was an extemporized one and so were the signals, and it was the first occasion on which the senior officers of the Pakistan army had had an opportunity of exercising command at that level, so naturally there were some creaks and groans in the machine. But I was very impressed with the work that had been done, and the standard which was achieved under those circumstances, and I think it was a very bold and imaginative effort on the part of the Commander-in-Chief to hold such an exercise and carry

it through. The troops were excellent: they had been in the field for some three weeks, but they showed no signs of being tired or even bored; they were alive and alert, and very careful attention was being paid all the time to concealment and dispersal, and everything that goes to make for efficiency at the individual, sub-unit and unit level. I am quite certain that if any of you had seen these troops, and those of you who are more experienced than myself in judging the quality beneath the superficial appearance of Pakistani troops, would have been pleased and impressed with their performance. I have already mentioned that this was the first time that senior officers of the Pakistan army had had an opportunity of exercising command in the field at that level, and there is no doubt that they have a great deal to learn, but so has everybody else. I never go to Germany to see our 1st Corps there, which is a very highly experienced formation, on a field exercise without finding a good deal to learn myself and for others to learn too. But generally I was very impressed. If you are accustomed, as I am, to going around the British army and finding boys of anything between eighteen and twenty as N.C.O's, and full sergeants at the age of 22 to 25, it is very impressive to inspect a tank crew, as I did, when I was going round one of the headquarters of the armoured brigade in this exercise, and find on inquiry that the length of service of the various members of the crew worked out at an average of fifteen years. If you have that wealth of experience and training behind you there is very little you cannot achieve, and that is a very great asset which the Pakistan army, and indeed the Indian army, has got and which we unfortunately are lacking to a large extent at the present time. The last afternoon I was there I had a sporting interlude which I enjoyed very much.

From Quetta I went on to Kakul to visit the Pakistan Military Academy and we paused at Abbottabad on the way for a cup of coffee in what was the old 6th Gurkha Rifles mess. It is now a permanent Piffer mess and, having been Colonel of the 6th Gurkha Rifles, I was very interested and pleased to see that it was being very well maintained. At Kakul I was received by a guard of honour of cadets from the Military Academy, and a very fine body of young men they were. They looked extremely smart on parade in their blue uniform; their drill was excellent and the two or three of them to whom I spoke answered my questions in a forthright and straightforward manner. We inspected some of their living accommodation, and here they are under some handicap as the hatted accommodation is not ideally suited for a Military Academy, but they are making the best of these conditions. We also visited various classes and met the Director of Studies whose enthusiasm is absolutely unbounded. I was most interested to see that very careful attention is being paid to the

technical, scientific and engineering side of the training of the young officer cadets. If what I saw can be taken as representative of what is going on all the time in the Pakistan Military Academy, I feel confident that the standard of cadet who is coming into the army, and the system of education and training that he is being given, will provide the Pakistan army with a good supply of really well-equipped, upright, high-principled and well-trained young officers in the future. My impression therefore was that, as far as the young entry is concerned, their training and education are being well taken care of.

MEETING THE MALIKS

My tour continued with a visit to Peshawar, where the Governor very kindly put me and my party up for the night and invited all the local notables to meet us at dinner, which was extremely interesting. The following morning I got up early and spent a very happy time with the Peshawar Vale Hunt, and although we did not kill a jackal we had a most enjoyable and healthy morning getting back at about 10 o'clock when we changed and went on to the Khyber. At Jamrud we were met by a guard of honour of the Khyber Rifles which was very well turned out and I was asked by the local Political Officer to meet the Malikis, which I very much enjoyed doing. They were a marvellous collection of grey, black and red beards, all with their own weapons. I went down the line shaking hands and as I got to about the fourth man the first gun went off, which was the signal for all of them to start and there was a regular *feu-de-joie*, which was most interesting and amusing if you did not happen to be too near the chap who was letting off a home-made Sten gun from his hip. Afterwards they gathered round—there was an American General, a Turkish General and an Australian General there as well—and they gave us quite a long lecture on the failure of the British and American Governments to get the Kashmir problem solved, pointing out that if we did not hurry up about it they would have to take the law into their own hands. We very diplomatically said we took note of what they had to say and would report it to our respective Governments. But they were in very good fettle, I thought, and it was of great interest to me to meet them. We went on up through the Khyber down to the Frontier, where the usual Afghan sentry still stands looking very bored and tired; then we went back to the mess at Landikotal where we were regaled with an excellent lunch and I was shown, which was of great interest to me as I had not seen it before, the visitor's book there which contains, I think I am right in saying, the signatures of Field-Marshal Wavell as a captain, Field-Marshal Auchinleck as a major and of General Douglas MacArthur

as a captain. This, with other records of the past, are being very carefully maintained and well looked after. The interesting thing about the Khyber now is the total absence of regular troops and when I asked about it was told, "Well you see there is no one now for them to fight against." In fact they are getting terribly bored because, except for an occasional inter-tribal feud, there is nothing in the way of sport. I thought, however, that perhaps it was a good thing that the area was so much more peaceful. This ended my stay in Pakistan as I returned to Peshawar that evening and left by plane for Delhi.

It was really a most interesting, impressive and enjoyable visit. As I said before, I received a wonderful welcome wherever I went and was regaled with unbounded hospitality, and came away with a strong feeling of the most genuine good comradeship. I think I have indicated that the Pakistan army faces some pretty serious problems. I would say that one of the most serious is on the organization side. There are certain things which are inherent in the present set-up. There is the wide separation of East and West Pakistan, which must make it extremely difficult from the administrative point of view of the army: there is the fact that Army Headquarters, which carries out the functions of our War Office as well as the direct command, is situated at Rawalpindi which, I think, is some 800 miles from the seat of Government in Karachi: there is no what we term static command structure, which means that Army Headquarters is dealing direct with divisions and districts. All this is perhaps rather technical from the military point of view, but steps are being taken to put this right and introduce a form of command which would be more suited to circumstances and conditions, and which will mean that there is not such great centralization at Army Headquarters. But that is a problem which they have to face and which they are setting about now. It is a problem which will not be easy to solve and will probably be rather expensive.

THE SECOND PROBLEM

The second problem facing the Pakistan army is that of equipment. The Americans are most generously providing military as well as economic aid to Pakistan, and that military aid is taking the form partly of American equipment, which presents problems for the Pakistanis both in the case of maintenance and repair because the Pakistan army is set up at present entirely on British pattern equipment. That, however, can be solved, but it does call for very close co-operation between the Americans, the Pakistanis and, to some extent, ourselves, and is already under very active discussion. But this is a very real and serious problem and one

which, if it is not successfully solved, will definitely detract from the fighting efficiency of the Pakistan army and its ability to carry out its job in a protracted war. The third problem which struck me was in regard to technical personnel. Armies to-day are becoming more technical; equipment is becoming more complicated, and so there is a greater need for highly trained technicians throughout, and Pakistan, I think, has got a real problem in providing the technical personnel which she will need for her army in the future. Those are the three problems which struck me. Except for the inherent weaknesses, which derive from the geographical set-up of the country, they are all soluble and efforts were in hand to solve them, but it will take time. I believe that, given stable political conditions, given the same resources as armed forces are being given now, given continuing American aid, and the growing experience of commanders and leaders, given steady production of more highly trained technical personnel; given those things—and all of them are achievable—the Pakistan army can look into the future with confidence. That is my very rough, frank impression of what I saw, heard and discovered during a week's visit to Pakistan. It was a wonderful experience and one for which I shall always be most deeply grateful to the Pakistan Government and the Pakistan army.

Now, if I may, I should like to turn to India. When I arrived at Delhi I was met by General Rajendrasinhji, Commander-in-Chief, and some of his senior staff officers. He is a man with whom I have had a great deal of contact during the past two and a half years, and for whom I have the greatest admiration and affection, and it seems to me that he has done a very great deal for the Indian army. While in Delhi I called on the President, the Prime Minister and the Minister for the co-ordination of Defence—I think he has been changed now. He told me that they were all very grateful for the inheritance of traditions, practice, ideals and principles that the present Indian army had received from the old Indian Army. I also met all the high-ranking officers of the Army and Air Force while I was there and got a very good insight into their problems. I was given the honour of addressing the senior officers of Army Headquarters and Delhi District and I spoke to them, as I had done to their counterparts in Pakistan, on the subject of developing armies to meet the needs of modern warfare. While I was in Delhi I went to the new cantonments and visited the Rajputana Rifles Training Centre, where I saw recruits under training on the square, and at various other activities. It struck me as being a very well-run and efficient training centre, certainly the Quarter Guard was very good indeed and so was the stamp of recruit. I was shown recruits just on joining and then after about six weeks' training, and the progress which was being made was remarkable. The

next day I went to Agra, where I saw parachute training in progress—synthetic training which was very well conducted. I was impressed by the quality of the men who were under training, and by the standard of instruction.

PASSING OUT PARADE

The following day was the high light of my visit to India because General Rajendrasinhji had done me the very great honour of inviting me to take a Passing Out Parade at the Indian Military Academy at Dehra Dun. It was an excellent parade. The drill, the marching and the bearing of the cadets were first class in all respects. Of course Dehra Dun is an excellent setting and the buildings were designed as a Military Academy and in that respect India had benefited very much. It was also interesting and pleasing to find that the order of parade was actually the same as at Sandhurst, even to the adjutant riding his horse through the main entrance of the building at the end of the parade to the strains of "Auld Lang Syne." I was also very impressed by the cadets to whom I spoke, and it was a privilege to be allowed to present the Sword of Honour and the other prizes to the cadets who had passed out at the top, three very fine looking young men. I talked to some of the parents afterwards, and the Commandant had a buffet luncheon party on the lawn of his house there and you could not have had a more delightful and pleasing atmosphere. After that I watched a cricket match between past and present in which the Commander-in-Chief played and complained about the lack of nimbleness of some of the younger members of his team.

I went to see the 58th Gurkha Training Centre, which is the Training Centre for the 5th and 8th Gurkhas. I saw recruits under training on the square; the family welfare centre with all the needlework and baby-weighing that goes on in all family welfare centres that I have ever visited, and it was very good indeed. I was also present at an excellent P.T. display by a group of small boys, sons of N.C.O's and other ranks of the Regiment at the Training Centre, and finally I saw a demonstration of fire control and fire discipline by a section on the military range. All of these activities were of a very high standard and I was very glad to be able to write a letter, which was later published in the 8th Gurkha Group Letter, giving a short description of my visit there. The same afternoon I had my second shoot. General Rajendrasinhji took us out for a couple of hours into the forest where we had a bang at jungle fowl, which brought to an end a most impressive and inspiring day I shall remember all my life. I think that if what I saw, and the cadets to whom I talked, are typical of the cadets that are entering the Indian Army now, then the

Indian Army, like the Pakistan Army, is well assured of the future of its corps of officers.

We went down to Mhow, where I visited the School of Infantry and the School of Signals and talked to the officers of both Schools. I think it was the only place in my tour of both countries where I saw a model exercise of company commanders in progress. It was well conducted and the discussion was interesting. From Mhow I proceeded to Wellington where I had the honour of talking to the Defence Services College. General Lentaigne, who has been running the College, has just handed over to an officer of the Indian Army. Here again the atmosphere was very impressive and encouraging. The readiness with which people discussed problems, the freedom of speech between the instructors and students, and the way in which the students of different nationalities were working together, struck me very much indeed. I think that atmosphere, which I claim to be typical of our own British institutions, prevailed in all the educational and training establishments which I saw both in India and in Pakistan. It is certainly very prominent at Wellington. The Ooty Hounds were still going and they were produced for my inspection after I left the Defence College, and I must say they were the best disciplined pack of hounds I have ever seen.

NEW MILITARY ACADEMY

My last but one port of call in India was Poona. I met there General Shrinagesh, who is to take over from General Rajendrasinhji as Commander-in-Chief in the course of the next few months, and if I may say so, I think the Indian Army is fortunate in having an officer of his experience and wisdom to take the place of the present Commander-in-Chief. He showed me the new type service Military Academy which is being built outside Poona on a very magnificent scale. I was very envious and asked what it cost, and was told something in the region of six million sterling. I wished that I could get as much out of Her Majesty's Government of the United Kingdom to do a bit more about Sandhurst and the accommodation there. But it struck me that it would be a very fine place indeed, and I think I am right in saying that the concept was originated by Field-Marshal Sir Claude Auchinleck when he was Commander-in-Chief in India. I certainly hope he sees it when it is completed, and I know he will be both pleased and proud when he does. Any cadet who passes through there will have a very fine background and a military home of which he can justly be proud, and this will be of great help to the Indian army of the future. We then visited the College of Military Engineering, which is a combination of our School of Military Engineering and Military College of Science. This building has only recently

been finished, is very well equipped and designed, and will amply provide for the education and training of technical staff officers, sappers, mechanical engineers, signals and so forth. Finally we stayed as the guest of the Jam Sahéb at Jamnagar who, as you know, is a kinsman of the head of General Rajendrasinhji's family, the famous cricketing family. He was the most wonderful host and we had an enjoyable and happy evening to end our stay in India. It was with great regret that I left the following morning by air on my way back to the United Kingdom.

Just as my visit to Pakistan had been, so was my tour of India intensely interesting, very enjoyable and a wonderful experience. Everywhere I was given a warm welcome and the most bountiful hospitality. It was of real value to me as it did enable me to do far more than I otherwise could have done in my present job to promote co-operation between ourselves and the Indian and Pakistan armies. Like the Pakistan army, the Indian army has some pretty big problems to solve, and I would say there are about three of them. First, there is no higher training being given as far as I know, or was told, at present. That is the deliberate policy for the time being, but an army cannot maintain a readiness for war unless it does do quite a bit of such higher training, and no doubt it is in the minds of the military authorities in India. Another problem which was mentioned to me is the difficulty of maintaining the proper standard of living for the corps of officers. They are quite determined to maintain that standard but, with the limited financial resources at their disposal, and with the economic difficulties with which India is faced, this presents a very real problem. It would be most improper for me to comment on it more than that, except to say that it is a problem which I hope they will solve, because I firmly believe, and I know they do too, that it is very necessary to maintain a certain level and standard of living for a corps of officers if you are to attract the right type of young man to make the army his career as an officer. The Indian army's third problem, like that of the Pakistan army, is one of equipment. The army in India is still equipped with last war weapons, and some time or other they will have to face the problem of re-equipment with more modern weapons, and these are expensive. Those are, in my opinion, the three greatest problems the Indian army will have to face in the future.

THREE POINTS

In conclusion there are three points I would like to make. First, there is the relationship between the armies of India and Pakistan. I found no evidence whatever of any animosity between the two armies over Kashmir or anything else; in fact I found the reverse. As far as I

was able to judge, there exists an anxiety to get closer together, to establish really strong bonds of good comradeship, and a definite start has been made in this direction. Last year the Pakistan army organized a very excellent horse show in Lahore and invited the Indian army to send a polo team to play them there, and this year the same thing happened. The Indian army has now invited Pakistan to send a polo team on a tour of India. Further, when I was in Peshawar the wife of one of the Pakistani officers said to me "What a pity it is we do not see many of our old friends now because they are on the other side of the border." This and various other remarks and statements that were made to me gave me the impression that there is a strong desire in both armies to restore the comradeship and good fellowship which they enjoyed when they all belonged to the same army. So, as far as the armies are concerned, there is no animosity and no political factors enter into their own internal thinking over that difficult problem of Kashmir. The second point I would like to make is that, from all I saw and heard, my feeling is that all those who served in the old Indian army can take real pride in the way their two offspring, so to speak, have got started and are on the way forward to further development. I am quite sure when I was told of the value and importance which both armies attach to the traditions and standards of the old undivided Indian army, to the inheritance which they received from many people who are present in this room, that they are absolutely genuine in what they say. There is also strong visible evidence that this is so, and I would say that everyone who served in the old Indian army can take great pride in the way in which those traditions, and the great reputation they helped to build, are being carried on by their two healthy young offspring. Lastly, I would like to repeat how very grateful I am to both countries, and both armies, for the wonderful experience which they gave me. For my part, I shall always regard it as a great privilege and pleasure to do anything that I can to help the Pakistan and Indian armies, and I look upon them both as good comrades of ours to whom we are bound by common traditions and principles.

QUESTIONS

Of the many questions put to the speaker at the end of his address, the first was from Mr. S. M. Hassan, who inquired whether there was any foundation for the rumour that American air bases were being established in Pakistan. The Field-Marshal replied, "Not to my knowledge."

Mr. Chinna Durai asked if there was any desire on the part of India to emulate the modern military equipment and economic achievements of China, which may at some time or other become an aggressive neighbour. Sir John Harding said: "When I dined with Mr. Nehru in Delhi

he spent most of the time talking about his visit to China and Indo-China. He was very impressed with what he had seen of the way in which the Chinese, because of their completely autocratic control and ruthless discipline, had been able to achieve improvements in the direction the questioner had mentioned. Mr. Nehru was equally impressed, or rather appalled, by the complete lack of knowledge of the outside world displayed by the present leaders of China, and he obviously thought that a very serious danger. During my tour I got the impression that among a lot of people there was a great consciousness of this very difficult economic problem which confronts India, of dealing with a vast population with limited resources, and gaining for them, through her own efforts, an improved standard of living."

The question of the supply of American type equipment to the Pakistan army was raised and whether this would not conflict with the British pattern weapons which, up to now, they had used and with which the Pakistani troops were familiar. "The ideal arrangement," the Field-Marshal replied, "would be a complete standardization of military equipment throughout the free world. This was unattainable for a variety of reasons, one of which was that standardization has to start at the research and development stage and a great many weapons were already beyond that stage. It was also unattainable as there were quite considerable differences in engineering techniques between the United Kingdom, for example, and the Americans. But this did not mean that adequate standardization could not be achieved. It would be a mistake for Pakistan to equip her army with various types of weapons, but in these hard times it is better to take what you can get, and make the best of it, than do without. This is a question of doing the best you can with what you can get, and I believe that, generally speaking, what is being done is right."

On being asked whether the fact that American military advisers were being used in Pakistan would mean the gradual nullification of British influence in the army the speaker said: "I would like to remind you that the defence of the Middle East and South Asia is of common interest to both Britain and America. The closer we and the Americans can work in conjunction with Pakistan so that we all play our part in the defence of those areas, the better it will be for all of us."

Sir Olaf Caroe asked whether the Scouts and Militia on the North-West Frontier were still controlled, as formerly, directly by the army. The Field-Marshal stated that he was not at all certain about this, but the impression he had received was that the Khyber Rifles were still controlled as part of the army.

Finally Sir John Harding was asked how far the British Army was helping to remedy the lack of technical personnel in the Pakistan army to which he had drawn attention in his address. "At the moment," he said, "there are quite a few British technical officers seconded to the Pakistan army, but they are being steadily replaced by Pakistani officers. The lack of technical personnel required in a modern army is not a problem peculiar to Pakistan; it is one which we ourselves have to face. I think the answer lies in more technical schools and colleges for the population of Pakistan as a whole, out of which the armed forces could draw their requirements. As another remedy I would suggest the establishment of the British pattern apprentice schools for boys who are inclined to make the army their career, where a technical training is given against a military background, combined with a general education."

This concluded the discussion and Sir John Woodhead, Chairman of Council, proposed a hearty vote of thanks to the speaker and the Chairman. "It is most encouraging," he said, "to those of us who served in India and who knew the old Indian army, to hear that the traditions and efficiency of that army are still being maintained. The Field-Marshal's remarks regarding the friendly relations between the officers of the two armies was a very good omen for the future."

Indian Budget Policy and Planning

By GEOFFREY W. TYSON, CIE

AN ADDRESS on Indian Budget Policy and Planning was given by Mr. G. W. TYSON to a joint meeting of the East India Association and the Over-Seas League at Over-Seas House, Park Place, St. James's, S.W.1, on Wednesday, 6th April, 1955. Sir JOHN TAIT took the Chair.

Opening the meeting, the CHAIRMAN said: To most of those present here to-day and who had any association with India during the last quarter of a century, either in business or commerce, or in the senior administrative departments of the central government and the secretariat of the provinces, Mr. Tyson must be a very familiar figure. Mr. Tyson first went to India about thirty years ago as Reuter's correspondent. Early in his career he left Reuter's and joined *Capital*, that well-known

financial and commercial publication which is issued from Calcutta, and of which he was editor for twenty-three years. It was true in my time, and I expect the position is pretty much the same to-day, that no business office in the sub-continent of India or in Burma, or I should imagine in Ceylon, was without the weekly copy of *Capital*, and I think it may safely be said that the same could apply in the case of the finance and commerce departments of the various governments. I can well understand how anxiously those in charge of the departments of government at Delhi must have awaited the comments of *Capital* to judge therefrom the non-official reaction to the policies they were proposing to institute and had instituted. If comments were favourable everybody was much relieved; if critical, they were much concerned, for *Capital* was rarely wrong at least we non-officials always took that view. To wield so much influence in so wide a circle, over so large an area, and in such elevated quarters, and to sustain that influence over so many years, clearly indicates an authority of outstanding merit and expert qualifications. There is further evidence of this in the various public appointments which Mr. Tyson filled during his long and distinguished career in India. He was a member of the Indian Legislative Assembly, Publicity Adviser to the Bengal Government, Chairman of the Public Relations Committee, Bengal, and held other important appointments. When Mr. Tyson retired from India, two years ago, the India, Pakistan, Burma Association were indeed very fortunate in securing him as their Secretary. In that position, and by his numerous contributions to the financial and commercial newspapers, and periodicals in this country, and by his own publications Mr. Tyson is rapidly establishing a reputation for himself in the City of London which looks like emulating that which he held for so long in India. He will speak to-night on this complicated and complex subject of the Indian Budget policy and planning. He speaks as a real expert and we look forward to hearing his remarks with great interest and, I venture to suggest, no little concern. For many of us it is difficult to reconcile the professed desire of the Government of India for more British capital and investment in the development of the industries of India with the disturbing features in the present Budget, which could be interpreted as intended, deliberately or otherwise, to have exactly the opposite effect. I will now ask Mr. Tyson to address the meeting.

MR. TYSON: I think we might start by reminding ourselves about one or two of the main principles which govern budgeting in South Asia generally, and in India in particular. All Indian Budgets to-day are closely geared to the Five Year Plans. The concept of economic planning has sunk very deep into the consciousness of the South-Asian peoples

and, in particular, into the minds of the Indian people. Mr. Deshmukh, when he was introducing his budget to Parliament, remarked on the fact that the country had become extremely "plan conscious," and it follows that practically all financial and economic legislation is designed to fit into the pattern of planning. This 1955-56 Budget is no exception, indeed it carries the whole relationship between public finance and planning a long step forward by comparison with previous budgets. Also these Indian budgets are no longer purely balance sheet achievements, they have become just as important as pronouncements of economic policy as of financial policy. The third point to remember is, that the job in India, as indeed in every country in Asia now, is how to find the real resources for the various development schemes and projects which have been put in hand. Real resources can, of course, only be expressed in monetary terms, and that is why the budget has this particular kind of significance which I have suggested in my opening remarks.

MAIN FEATURES OF THE BUDGET

Turning to the 1955-1956 Budget in particular, I suggest that there are three or four main points that might reasonably be noted. In the first place, this budget has been acclaimed by the press and by the Legislature as India's first socialist budget. I should say that, having scrutinized carefully the verbatim text of the Finance Minister's speech, Mr. Deshmukh does not himself anywhere use the term "socialism" or "socialist"; but nonetheless the dominant party in the country and in the legislature insists that this is a beginning with a policy of socialism. To that extent, of course, it fulfils the various pronouncements and statements that have been made from time to time by the Prime Minister himself. It is not wrong to say that Mr. Nehru has, throughout his life, shown a very great leaning towards collectivist and socialist theories. More recently, at the Avadi session of Congress in January, the Congress party came out quite openly for more egalitarian policies and for a stronger socialist emphasis in all economic policy and planning. The second general point to which I would direct your attention is, that this particular 1955-56 budget makes a beginning, and it is only a beginning, in implementing the recommendations of the Indian Taxation Inquiry Commission which was presided over by Dr. John Matthai who, as you know, is an economist, a business man and a former Finance Minister. That Report, which we have received in London, is a massive document and I am not going to pretend that I have read every line of it, I have skimmed one or two chapters. But it is a very comprehensive survey of the tax resources and the tax problems of India, and as such, I venture to believe, it will

repay a certain amount of study because, it seems to me, that it is going to be the textbook from which the present Finance Minister, and possibly his successors, will derive much of their thinking in the future. The third point which I would mention is that this budget quite specifically, and more definitely than any of its predecessors, seems to me to carry the threat, or if you like the promise of considerable deficit financing. The Finance Minister did not disguise his intentions in any way; in fact, he mentions it quite specifically, and says that he is going to take what he calls a "calculated risk" in the field of deficit financing. I will come back later on in my talk to these three points which I have mentioned; but for the moment it is sufficient if we note that they do mark a considerable departure from past precedent.

Let us look at the overall picture. I do not want to weary you with a whole string of figures, but taking the "above the line" i.e. ordinary expenditure for this coming year, Mr. Deshmukh estimates it at Rs. 499 crores, let us say Rs. 500 crores, and he puts his ordinary or above the line revenue at about Rs. 490 crores. There is, therefore, above the line an uncovered revenue deficit of between Rs. 8 crores and Rs. 9 crores after taking credit for Rs. 21½ crores of new taxation which is to be implemented in the Finance Bill. It might be worthwhile noting, in view of criticisms which those of us who lived in India in the past heard *ad nauseum*, that of the total above the line expenditure of roughly Rs. 500 crores, no less than two-fifths still goes to the Defence Services and three-fifths to the Civil Departments. Of the very large sum of money which the Finance Minister is proposing to raise by way of ordinary revenue in the coming year, it might also be noted that receipts from income-tax and from customs and excise furnish a little less than one-third each of the total. So that the whole pattern of Indian finance has not greatly altered since Sir Jeremy Raisman was in charge of these matters, and that means there continues to be a very heavy burden placed upon the three main sources of revenue. Those of us who have had fairly long experience of Indian budgeting know that some of these heads of revenue are somewhat exiguous, and often not a little chancey. I looked at the Finance Minister's speech again just before I came here, for an example of that sort of thing; and I see that on the subject of tea export duty he spoke of the enhanced rates, which he put up in January, bringing in an additional Rs. 11 crores in 1955-56. I think it was on March 31st, that the duty was reduced from ten to eight annas owing to a fall in the auction prices, so that shows he has not really got a great deal of elbow room. One cannot be too certain about these things and it seems to me that the Government of India must look, perhaps, much more to excise duties and to higher yields from them and less to customs receipts in the future.

That is a very rough sketch of some of the main features of this budget, but it is not the whole of the story by any means. The thing that causes me some apprehension, and I believe must cause anybody who looks at these matters closely a certain amount of doubt and trepidation, is the magnitude of the below the line or capital expenditure which is contemplated in the next twelve months, and which is merely the precursor of even larger amounts. Capital expenditure in this year is planned on the basis of about Rs. 578 crores. That is a pretty tidy sum. But, after taking credit for loan operations, for small savings, for foreign aid and miscellaneous transactions, there is to be an uncovered deficit of about Rs. 340 crores, which the Finance Minister proposes to meet by the issue of Treasury Bills. Let me quote him on this point, because I think it is important. He says: "This will leave a gap of about Rs. 340 crores in my available resources to balance the Budget. As the cash balance will have no margin left to be drawn upon, the whole of this gap will have to be met by the issue of Treasury Bills." He goes on, and this is the significant part, "the sizeable budgetary deficit in the current year and in the next must be viewed in the context of our development needs in the various economic sectors like production, prices, employment and foreign exchange. All these, I think, suggest that we can, and should go ahead more boldly. The production potential of the economy is steadily increasing as a result of the Plan and considering the present price and employment situation, I am confident, that while no effort should be spared in maximizing our resources, budgetary deficits of this order carry no threat of serious inflationary pressures. Nevertheless, the House may rest assured that the situation will be watched constantly and carefully, and while Government will take the risk necessarily attaching to any significant development effort, it will be a calculated risk combined with caution."

One could talk at great length about deficit financing and I will have a word or two to say on it later. I would merely say this much now; I do not for a moment suggest that the Indian authorities embark on this sort of thing lightheartedly. I am sure they do not. But I do believe that there are very serious dangers lurking in deficit financing unless the operation is supervised with skill, experience and great understanding. The traditional method of raising money by deficit financing is, of course, the issue by government of large quantities of Treasury Bills. This kind of thing is not a new operation in any sense of the word. I think I am right in saying that Treasury Bills in this country go back to 1877 during Sir Stafford Northcote's Chancellorship. It is a British device which we have passed on to all our dependencies and colleagues in the Commonwealth and it is an entirely reputable and respectable method of raising money; but it has in itself certain inflationary seeds and impulses which,

unless strongly resisted, are likely to do damage to an economy in which there is a certain element of fragility. I have always felt that India could carry a great deal more floating debt than she actually does; but I have always thought that the amount of Treasury Bills, which as I have said are the documents by which such credit is raised, in the hands of the public in India was proportionately extremely small to the amount which was held by the Departments. But there it is. This is the technique which the Finance Ministry has elected to continue and I have little doubt that as long as Mr. Deshmukh is there inflationary pressures will be resisted, but one must take account of the underlying implications in the situation.

INDIA'S FIRST SOCIALIST BUDGET

Let me now go back to the three main points I mentioned at the beginning about the budget. The first one I said was that this has been proclaimed as India's first socialist budget. The real point we want to know in this country is, of course, just how socialist is the budget? I reminded you that Mr. Deshmukh himself did not once use the word "socialist" or "socialism" in the course of his speech. But the Congress press, the politicians and the foreign correspondents who have been interpreting its features to us have all hailed it as India's first socialist budget. How far then does it answer socialist tests and prescriptions? I would say that if high personal taxation is to be taken as a criterion of socialist budgeting, then this budget answers that test. It provides, amongst other things, for a rearrangement of the allowances on smaller and medium incomes and the raising of the tax rates on incomes up to fifteen thousand Rupees a year, which is to bring in something like Rs. 2½ crores of new revenue by way of income tax. Earned income allowance has been readjusted on incomes in excess of twenty-five thousand and additional tax revenue of no less than Rs. 5½ crores is to be secured by this means. Now I would ask you to remember that India has got less than one million assesseees to income tax, and altogether these are to be asked to pay, in this coming year, something like one crore of extra direct personal taxation against which, it is true, a trifling concession of Rs. 500 is to be given to married assesseees who begin to be taxed at Rs. 2,000 per annum instead of Rs. 1,500. Mr. Deshmukh has called this a beginning to evolving a suitable scheme of family allowances. For myself, I should have thought that discouragement than rather encouragement of families should be India's policy when her population is increasing at the rate of something like 3½ million a year. That sort of thing seems to me to be really the economics of "cloud cuckoo land," and I can only think that

a man of Mr. Deshmukh's qualities has thrown that in as a little sop, a little lip service, to the general concept of welfare which has been adopted.

EFFECT ON FOREIGN INVESTMENTS

Then he has made it clear that they are going to come down with a pretty heavy hand on allowances. This is going to react adversely on the ability of foreign, and particularly British business concerns, to recruit suitable personnel. There is some prospect that we may get some reliefs under that head, but I think the rigorous application of this taxation of allowances will have a growing adverse effect on our ability to supply our businesses with men of the right quality or to make it worth their while to embark upon a long term career in India. I was in India at the end of last year and one of the outstanding impressions which came to my mind as I went round the country, and I attended meetings at various places, was the very rapid changes that had taken place in the British community. There was a far higher proportion of short-term technicians now in the totality of the British community than there ever was before. Partly I think that is because they are concentrating a good deal more on industry than on trading and distributing activities, but also because men are to-day becoming increasingly reluctant to commit themselves to a very long period of service, either implicitly or directly, with their firms. A further point that must have a depressing effect, although it is not directly concerned with the budget, is this continuing talk, these sustained references to the need for putting a ceiling on salaries. The matter finds a mention in the Taxation Inquiry Commission Report and it was the subject of a resolution at the Avadi session of Congress, and that resolution has been remitted to a working party.

FUTURE OF THE INDIAN ECONOMY

When you add all these things up you are obliged to say that the prospects are becoming less and less rosy. India either wants foreign enterprise or she does not, and this particular budget for 1955-56 has failed to give a clear-cut answer to that question. What it has done is to underline some of the doubts, some of the hesitations which have been growing in our minds about the future of the Indian economy. The general effect of this sort of thing is disincentive so far as the individual is concerned. Mr. Deshmukh claims that his budget is an incentive budget for industry. How much so? It is true that he has notified a development rebate of 25 per cent of the cost of all new plant and machinery installed for business purposes, and that that is to replace the present initial depreciation allowance of 20 per cent. I have studied that sentence in part two of his speech,

and I am not at all sure that it means all the things we think it means. But this is a very trifling incentive if you look at it against the background of the taxation, legislative trends, amendments to the Indian Companies Act which serve notice on the managing agencies system and the legislation which is now proposed for the amendment of Articles 31 and 31A of the Constitution. I doubt whether you can really say that there is very much incentive in this. One is forced to the conclusion that, except by deficit financing, this budget will not really add anything to India's real resources, *per contra* it seems to me to contain a great deal that will discourage the personnel of private enterprise, be it Indian or foreign, even if it does not discourage private enterprise itself. The Finance Minister claims that heavy taxation is necessary for planned development, and for raising maximum resources, and for the attainment of what he calls, the welfare state. This is what he says, "It is because of the raising of the maximum resources necessary for planned development that I make the large draught, which I have to-day made, on the taxpayer's purse." Those are familiar words to all of us. He gives us a further justification for it, namely that, unless this is done the objective of a welfare state enshrined in the Constitution will never be attained. I would not like to be misunderstood, for the welfare state is a new and worthy concept for Asia and I am prepared to honour India for her desire to pioneer better living conditions for her people. But I ask myself, and I ask you, if it is really to be expected that less than one million taxpayers can carry the burden, or the great part of the burden, of a welfare state for the other 364 millions of India's inhabitants? I do not believe it can be done, for only a rapidly expanding economy can effectively secure welfare, in the broadest and most real sense of the word, for India's masses.

SOME DANGERS OF DEFICIT FINANCING

In the field of monetary thinking and science deficit financing is claimed as the great discovery of the 20th century. It is, as you might say, the sulphur drug of economics; but if you concede that it has got to be administered with considerable care and only on a doctor's prescription. The great author of deficit financing was Lord Keynes and he advocated it as an aid to industrial countries pulling themselves out of the slump of the early 'thirties, when there was in fact very considerable unemployment. It was argued that an increase in money supply, by raising the tempo of public and private spending, was the obvious way to stimulate demand for capacity which was lying idle, and labour which was unemployed. I fear that a great many things are to-day being done in the name of deficit financing which would cause Lord Keynes seriously to reconsider his

original thesis, were he alive to-day to see it. There was, if I may say so, a most excellent exposition of the dangers of deficit financing by Frederick Benham in the current, or last issue, of *Lloyd's Bank Review*, where the whole matter is set forth in admirably simple terms which can be understood by everybody. But Benham's argument (and it is not copyright to him, is an argument which I myself share) is that few of the conditions, in fact practically none of the conditions which were postulated by the original advocates of deficit financing, obtain in India to-day, or indeed in any of the underdeveloped countries of south Asia. I think it was two years ago that the Indian Finance Minister, with what I thought was considerable courage, invited a mission from the International Monetary Fund to visit India and to present a report to him on deficit financing. On the whole the trend and tenor of that report was to say that India was not a suitable subject for drastic experiments in deficit financing. India, it is true, is the most developed country of the south Asian region, but she is only very partially industrialized yet, and really has very little idle plant or machinery waiting to be put into action by the creation of a great deal of credit. She has got no real body of unemployed artisans, technicians and factory workers; in fact anybody who can manage a machine in India to-day is assured of an absolutely cast-iron living. She has got many under-employed agriculturalists with no industrial skills; she has many unemployed and educated middle-class young men, who may be potential scientists and technicians, but she has not got a lot of people standing idle for want of some monetary lubrication in the economy. It is fallacious, in my view, to think that there is a great deal of idle labour and resources waiting to be used if demand could be created or expanded, and that goes for all the countries of the Colombo Plan area. Unhappily, almost all of them are adopting deficit financing for their development plans, whereas the original purpose of deficit finance was to combat depression.

SOURCES OF TAXATION

Savings, taxation and budget surpluses, are really the three main sources from which governments can garner development finance. Throughout Asia, people, as you know, live pretty close to the bone, and savings are difficult to effect. That is a hard fact with which the Indian and other governments in the area have to contend. Budget surpluses are also often a gamble on the monsoon, and I believe that Indian taxation has already reached its limit and, perhaps, is already becoming regressive. It is quite obvious too, that neither foreign aid nor foreign private investment can carry more than a small part of the heavy burden of development,

and India has got to find a great deal of her development finance out of her own resources. I would say, therefore, that in spite of the gloomy prognostications in the earlier part of my talk, some deficit financing is probably inevitable if the country is to get through. But equally I would say that there is not a great deal of scope for operations in that field which must be handled with considerable care and wisdom. India, it has been calculated, has to put aside something like 4 per cent of her national income if she is to carry through the remainder of the present Five Year Plan and the new Five Year Plan. I repeat, I am not greatly apprehensive as long as her finances are in the capable and experienced hands of Mr. Deshmukh, which seems to me to be an adequate guarantee that a close watch will be kept on developing inflationary trends. As to whether Mr. Deshmukh carries the same authority in politics as he does in economic matters, I am not going to express any opinion; but he is a master technician in his own particular sphere, and I believe that, left to himself, he will watch all the dangers which I have suggested this evening.

I am afraid my talk has been a little on the gloomy side, but I would like to say that I, and perhaps all of us here, owe a good deal to India. Speaking for myself, whenever I feel in a hypercritical mood about India, I try to remember that any small success I may have attained personally is largely due to the opportunities which India gave to me, and she must have given opportunities to thousands of others. One is greatly sustained by the extremely friendly relations which exist between ourselves and individual Indians. I was quite overwhelmed with kindness and hospitality when I visited India again at the end of last year. These are purely personal reasons why I want her to succeed, and I believe all of us want her to succeed in her plans, and if we do sometimes make criticisms, our goodwill is more abundant and stronger than our criticisms. All of us wish India well, not only because she has come to occupy, by reason of the sophistication of her people and the quality of her leadership, an outstanding position in south Asia, but also because it is tremendously important to us of the free world that these great experiments in the field of planning and development should succeed by democratic means. I have often felt that, as long as we can keep India content to be in the free world, at least communism is halted at that point in Asia. So that anything that I may have said this evening, which suggests a carping or critical approach to the 1955-56 Budget, is, I hope, leavened by the fact that we all of us wish India all success in her various planning projects in the future.

Sir WALTER GURNER asked how the financial organization of the Indian Industrial Planning Corporation was working out. Mr. Tyson in his

reply said: "It has hardly come into the picture at all yet. The formal meeting of incorporation took place some time in January, and the Corporation, so far as I know, has not yet begun operations, but the underlying idea is that it shall assist the flotation of undertakings in the private enterprise field. The equity and loan funds available to the Corporation have been jointly subscribed by the World Bank, the Government of India using counterpart American funds, and by subscriptions to shares which have been made in India, here in London and, to a lesser extent, in America. The initiative, I think, came from the World Bank. The idea was conceived when the outlook for private enterprise was perhaps more encouraging than it has become as a result of the 1955-56 budget.

Sir FRANK BROWN referring to Mr. Tyson's statement in his address that one million taxpayers had to bear the burden of 364 million other Indians, asked to what extent the budget relies on indirect taxation. In answer, Mr. Tyson said that above-the-line revenues were roughly divided into three equal parts. He thought that in the 1955-56 year, the Finance Minister had provided estimates to show that his receipts from income tax would be of the order of Rs. 165 crores, roughly one-third of the total amount of taxation which he was raising. "I may have given a wrong impression on this point," Mr. Tyson said, "but I did not intend to suggest that one million income tax payers were carrying the entire burden of a welfare state. What I ought to have said was that it was quite wrong to suppose they could finance the welfare state; quite obviously a great deal of it has to come from direct taxation, as it does in this country. Forty per cent of our financial resources here go in tax, and it is quite incredible to me that less than one million people can make a major contribution to the welfare concept of 364 million. Mathematically that is the way it works out."

Dr. H. S. BATRA asked Mr. Tyson as he did not agree with deficit financing, and the methods for raising finance, which had been put forward in the current Indian Budget, if he (Mr. Tyson) could suggest alternative methods for India to raise the money needed for her development plans.

Mr. TYSON: I did not suggest that the alternative was to sink back into the pit of misery and hopelessness. I think I also conceded that some deficit financing was inevitable, I did not condemn it out of hand but pointed to what, I think, are some of the lurking dangers in the situation. Nonetheless, I am comforted, and so are you, by the thought that Mr.

Deshmukh is in charge of this particular valve in the machine, and that he does know how to use it. Although some deficit financing is inevitable, it seems that an unduly high proportion of the whole of the development finance is going to be raised by a method, the success of which depends entirely on production and demand keeping step with successive issues of credit. Miracles may, of course, be performed. But it is not only 1955-56; one has got to look ahead as far as 1970, and if things went wrong, the multiplier effect might be considerable at some time. I believe India would get a great deal more foreign aid, more private foreign investment, and that the private sector of economy would be greatly encouraged and stimulated if the ordinary tests of solvency could apply to the budget.

Mr. MARDY JONES asked the speaker if it would not be feasible for India to turn to America for more financial aid to help with her development plans for raising the standard of living of her people. America was rich and generous and moreover, India, was the main barrier to the spread of communism in south Asia.

Mr. TYSON stated that India was not prepared, for self-respect and other reasons, to accept loans which had political strings attached to them. The American attitude, generous and understanding as it was, was generally not to advance financial aid without some political guarantees and Mr. Nehru has set his face against giving the type of security which the Americans wanted.

Sir JEREMY RAISMAN, on the subject of deficit financing, said: We are not without experience in the conditions of what might be called deficit financing. During the war although the "above the line" expenditure was never seriously uncovered, the "below the line" expenditure, incurred on behalf of the British Government and the Allies, was not covered, and I sought to cover it, as far as possible, by borrowing. Nevertheless it was covered by sterling balances which accrued to the Government of India, so I was always comforted by the feeling that it was merely a postponement; that India was exporting supplies and rendering services for which she was receiving credit, which could be utilized after the war. That is a much less dangerous position than purely deficit financing. It was the postponement of the rewards, so to speak, of the effort which they made during the war. Even so, it was impossible to prevent a very serious rise in prices, which was no greater than that which occurred in this country, although here it was masked by rationing and other methods of control which were only possible in a highly organized economy such as existed in the United Kingdom. Unfortunately,

the victims of that type of inflation are precisely those elements in the community which rely either on savings or pensions, or at any rate, are dependent on fixed incomes; and what worries me, particularly about the prospect if deficit financing goes wrong, is that you will strike a further blow at those classes. To turn to the political possibilities, these are the classes that consist largely of intelligentsia who are more likely to turn to communism than almost any other element in the community. So that the dangers of prolonged deficit financing, in my opinion, are political as well as economic. Planning by deficit financing still proceeds on the basis of the assumption of what you might call a free state. In other words, you get people to do things by paying wages. When that fails, and it begins to fail quite early in a continuous inflation, when money in fact is continuously depreciating and ceases to attract the worker, then your whole effort fails, and you can no longer mobilize even such resources and such labour as may still be unemployed. In other words, the dose loses its efficacy very quickly. I should say, from my own experience, and there is a good deal of analogy between conducting a war and conducting a planned development. In my own experience the value of deficit financing can be very greatly overestimated. It is true that in a plan of development the products of your efforts become available to you much more rapidly than is the case in war, for in war, you may get nothing out of it except freedom. But in the case of India, it seems to me, that her war effort was compensated by credits which she earned because she was allied with wealthier and more powerful countries, which were prepared to finance the supplies and services which she provided. The benefits were postponed and, it is true, owing to the decline in the value of money the bulk of those benefits was less than it would otherwise have been. But your development plan must include large sections which are not remunerative in the short or the medium term. If you build hospitals and schools you do, in course of time, produce a healthier and more skilled population, which is capable of participating in a higher form of economic activity, and in the long run you do increase the economic efficiency of the community, and presumably the economic product is greater and leads to a higher standard of life. But the period within which that higher standard is attained is, I fear, so long that the intermediate hardships endured could be almost intolerable. In fact, if you proceed by the method of using money, I do not believe that you will be able to provide an incentive for long enough to complete the plan.

Another very important point which I failed to mention is that, unless you can secure that the increase of population is checked, you will not only fail to achieve a higher standard of living, but you cannot possibly avoid the standard of living going down. If you do not pursue as a major and

prior object of policy a population policy which will reverse or, at any rate, check the existing growth of population, then even after the most herculean efforts and colossal spending, if nothing else intervenes to make the plan fail, you still finish up with a population so much larger that the increased benefits only give the existing standard of living. That, I think, is a very discouraging prospect, and I consider that one of the first objects of policy must to be concentrate on the population problem.

Sir Jeremy then asked Mr. Tyson what he thought about the Finance Minister's statement that India would create 27 million jobs in ten years. He presumed that his former colleague, the Finance Minister, meant that 27 million were to be absorbed into productive industry and secondary occupations, directly dependent on industry. He himself thought that, in view of the current financial policies which were discouraging to foreign investment, which could play a very considerable part in the economy of India, that assessment would be very difficult to achieve.

Mr. TYSON agreed with Sir Jeremy Raisman that this target seemed rather high when one realized that the total working population of the United Kingdom and Northern Ireland is about 24.3 million. He also shared Sir Jeremy Raisman's doubts as to whether it was physically possible to create 27 million jobs in ten years when at the moment there are only 3 million people employed in organized industry in India.

Mr. J. P. BRANDER raised the question of individual shares held by private investors in India, and the advisability or otherwise of disinvesting such shares.

Mr. TYSON thought that the question of disinvestment must be a matter of individual judgment. "There is no doubt," he added, "that people are being discouraged by present Indian financial policies and the complicated tax situation which had arisen between this country and India. I personally do not believe, and never have believed, that there was much future for personal investment. I think the Indians realize themselves that such private foreign investment that they get will be institutional and not personal and, I think, the tendency will be, particularly in the older industries, for individuals to disinvest."

Sir STANLEY REED moved a hearty vote of thanks to the Speaker.

India's Foreign Policy— As I see it

By J. CHINNA DURAI

A JOINT MEETING with the Over-Seas League was held at Over-Seas House, St. James's, S.W.1, on Friday, 6th May, 1955, when Mr. J. CHINNA DURAI gave an address. The Rt. Hon. Sir John Beaumont, QC presided.

SIR JOHN BEAUMONT said: "I need not take much time introducing Mr. Chinna Durai because he very often attends these meetings and generally takes part in the discussions. He is going to speak on the Foreign Policy of Mr. Nehru, and as he is going to tell us about it, I suppose he has discovered what it is. As a rule it is not easy to discover the foreign policy of any statesman, and I would not describe Mr. Nehru as one of the most transparent statesmen at present on the stage. I think it will be very interesting to hear what Mr. Chinna Durai has to say on this subject.

MR. J. CHINNA DURAI: Let us first of all understand India's foreign policy from India's own point of view as expounded by Mr. Nehru. In a word, it is "non-involvement." It is sometimes described as "non-alignment" which I believe is the same thing. Does this amount to "neutrality"? Yes, it does, but Mr. Nehru will not accept this term as applicable to India in a general way. He would distinguish here between "passive" and "active" neutrality and would like to regard India's policy as being more "active" than "passive." The difference is rather subtle, but I believe that while a passive neutral nation is all out for peace at all costs even if it could be had only through appeasement, an active neutral nation draws a line somewhere and is prepared to fight in defence of its own territory and its cherished principles. In his speech in the Indian Parliament on the 31st March last, Mr. Nehru clarified India's attitude to peace and war in the following words: "I want to be friendly with all countries and I want to live in peace in my country and I am interested in the peace of the world. We have absolutely no intention of throwing ourselves in war even if the rest of the world goes to war. Let there be no doubt about it. We will not go to war if there is war all over the world." This looks to me very much like "pacifism" with a vengeance with a good bit of "isolationism" knocked in, but you can draw your own conclusions. It would be well to remember in this connexion India's anxiety to keep clear of military pacts, *blocs*, and alliances of any

kind and her intense dislike of such organizations as NATO, SEATO, the Treaty between Pakistan and America and the Treaty between Turkey, Pakistan and Iraq. Briefly, therefore, in whatever way you look at it, the keynote to India's foreign policy is "Peace." India wants to be a friend of all nations and an enemy of no one. She wants to "live" and "let live" and is a firm believer in co-existence. She believes in the sanctity of human life and is insistent that on no account should the human race be allowed to perish in wars of the future in which, owing to the use of nuclear weapons, there would be no victor or vanquished but just huge piles of rubble under which would be buried the scarred remains of man, "the noblest creation of God." India also believes that there are and could be no differences so great between nations that they cannot be reconciled or composed around a table, as was the case in the wars in Korea and Indo-China. All this—as I have said in the beginning—is purely from India's point of view. The sincerity behind it is indeed most commendable. But there is another side to all this, and I will come to it later.

Let us now examine the background to India's foreign policy. What are the circumstances and events that have influenced and are influencing India's relations with other nations which are in many ways rather unique and—let me add—out of step with the rest of the world?

MR. GANDHI'S DOCTRINE

First of all, Mr. Gandhi's doctrine of "non-violence" and *satyagraha* have something to do with it, although I have known "non-violence" to get out of control and become violent at times. Speaking at New Delhi the other day on the anniversary of the birth of Mahavir—preacher of Jainism—Mr. Nehru said: "The answer to the threat of atomic weapons can be found in Gandhiji's teachings of 'non-violence.' The principle—though old in India—was applied for the first time in the political struggle. Under the Mahatma's guidance, we countered armed strength by non-violent *satyagraha* with the result that use of weapons became difficult for the other side too. Now, when the world is threatened with mass destruction by nuclear weapons, use of such weapons can become difficult if they are countered by spiritual strength." The only observation I would like to make here is that the Gandhi-inspired "spiritual strength" which was said to have overcome Britain—who was in any case contemplating quitting India peacefully—might not have worked at all against Hitler in 1939 any more than did Mr. Neville Chamberlain's spiritual mission to Germany armed with nothing more than an umbrella. It was when that umbrella—which I shall always regard as a symbol of peace

and non-violence—was transformed through toil, sweat, blood and tears into a tornado of bombs and bombers that the world and incidentally India were saved.

I will now deal with the other things which I believe have influenced India's foreign policy. Although India escaped the blood bath that the Western nations had to endure during the last World War and did not have to make the same amount of sacrifices that the Western nations were called upon to make in the first World War of 1914-1918, she is imaginative enough to realize the horrors of war and would like to steer clear of it even if she could only do so by running the risk of being black marked by the world at large as a "neutralist," "pacifist," "isolationist" or "appeaser." The advent of the atom and hydrogen bomb, the dreadful and unforgettable tales of horror and tragedy following the atom-bombing of Hiroshima and Nagasaki, and the serious Hindu-Muslim riots immediately after the transition of power from Britain to India which resulted in the tragic loss of about a million precious lives—which, by the way, "non-violence" and Satyagraha did not save—have not made things easy for India to see eye to eye with the West on the question of war and peace.

As a young nation of only eight years' independent standing, India has many urgent problems staring her in the face, the most important of them being economic. Her most immediate concern is to find ways and means by which her 380 million people—the majority of them subsisting on a starvation diet—can be assured of some food, shelter and clothing—the bare necessities of life. Without looking at all into any other side of Indian life—and there are indeed hundreds of problems to be tackled in the industrial, agricultural, educational, scientific, economic and social sphere—the mere job of keeping the nation alive with food calls for all the energy that the Government of India can muster. To cater, therefore, for India's military requirements, on an international scale commensurate with India's status as a growing Eastern Power is out of the question, and the idea is naturally ruled out by the powers-that-be as a luxury which India can well do without—at least for the time being. Her present modest but none-the-less smart and efficient Army, Navy and Air Force with equipment not quite in keeping with their smartness dating back, as they do, to the days of the last Great War, are all that she can afford for the purpose of maintaining law and order within her own confines and to ward off or rather keep at bay as best as she can any aggression from without. Her Five Year Development Plan needs all the money she can scrape and according to the Foreign Operations Administration of the United States of America India is already indebted to America to the extent of about a hundred million pounds. The intense strain on her

economy seems to me therefore to be another reason why India is almost forced to pursue a neutralist or isolationist policy in which her commitments, financial and otherwise, could be limited to her own self within her own borders.

A NEUTRALIST POLICY

But it must not be gathered from all this that India is forced to pursue a neutralist policy through sheer force of unfortunate circumstances over which she has no control. Of course she is also deliberate and determined in her thought and action in regard to her policy. She does not want to enter the arms race as she realizes that the time must come sooner or later when a point will be reached when it will be impossible for nations engaged in this unholy race to go any farther and that by common consent, or necessity, they will all have to come down to her level, the worse for having been in it at all. Although France entertained at one time the idea of manufacturing hydrogen bombs, she subsequently dropped it obviously overcome by a sense of futility and frustration at the mere thought of the colossal task of catching up with America, Russia and Britain, which had already made fantastic strides in nuclear enterprise. If France with all her resources and her genius for enterprise and invention could thus feel hopelessly left behind in the race, who can blame young India for not wanting to enter the arms race at all?

India is also conscious of the military might of Russia and China. She knows she cannot get anywhere near their strength in arms and armaments for a long while yet and rather than attempt reaching parity with them, which is not possible in her present circumstances, she feels that the safest course for her to pursue is to develop good neighbourliness which, I believe, she has done with remarkable success. Nothing of course pleases Russia and China more than the fact that their big neighbour—India—is harmless and can be depended upon not to take up arms against them or collaborate with others in the event of a flare up in South East Asia or any other part of the world. This reminds me that Russia is now engaged rather actively in influencing Austria to remain a neutralist on the pattern of Sweden and Switzerland. And yet Russia is not a neutralist herself! One is of course left to wonder what her game is.

Apart from her cautious outlook, it seems to me that India also ought to be credited with a confident outlook in the pursuit of her neutralist policy. This confidence comes to her, I believe, from being a member of the British Commonwealth of Nations and of the United Nations. When Hitler's armies seemed to be gaining rapid ground in Europe in the last Great War and things looked rather gloomy for Britain and her Allies,

Mr. Gandhi, who notwithstanding his political differences with Britain had great faith in her destiny, described the possible outcome of the war in these prophetic words: "Britain always wins the last battle"—and so she did! This confidence in the invulnerability of Britain based on her tremendous staying power which ultimately turned the scales in her favour in the two great World Wars is shared by most Indians of the older generation. These men are well versed in English history and have always admired such British heroes as Nelson, Clive, Wellington, Marlborough, Roberts, Kitchener and a host of others too numerous to mention. This is perhaps the reason why to-day after eight years of India attaining the status of an Independent Republic, an English admiral, Sir Mark Pizey, is entrusted with the supreme command of the Indian Navy. In addition to him there are still in India 45 British officers serving in the Indian Army, Navy and Air Force. Mr. Nehru said of them the other day in the Indian Parliament: "These officers have done remarkably good work and I would like to express my highest appreciation for the way in which they have thrown themselves into the work of developing the Services." As India is an Independent Republic and a neutralist, she may naturally want to be independent of military aid from either Britain or the other nations comprising the Commonwealth, but I believe, she feels secure all the same in the feeling that she is a member of the British Commonwealth which, she knows, is capable of inspiring respect and fear in the hearts of would-be aggressors.

Last but not least India's greatest hope for peace rests on the United Nations, of which she is a respected member. This organization regards aggression on any one of its members as aggression against all of them and is pledged to rally to the aid of the victim as it did in the case of Korea. With so powerful a body to rely upon in time of trouble, Indians may well say to themselves: "What do we want to build up a big force for, or envy or emulate the other nations in their arms race? We want just enough for our local needs and for the rest 'neutrality' is our best policy."

ROLE AS PEACE-MAKER

There is just another thing which, I believe, has encouraged India to follow a policy of neutralism and it is this. Where there was any kind of arbitration or negotiation necessary between the belligerent Communist and non-Communist nations, India seemed to be most eligible for the job owing to her neutral attitude. Her role as a peace-maker in the disputes in Korea and Indo-China gained recognition from no less a body than the United Nations, which rewarded her unique services by inviting her to serve on the Neutral Commission on Korea.

This concludes the case for India in support of her foreign policy as she would herself, probably like to see it stated to the world. This may not be a complete picture, but I think I have given the salient features of her policy supplemented by my own interpretations which may or may not find favour with India, but which nevertheless on my showing constitute a pretty bright and plausible story. However, if my subject this evening were merely "India's Foreign Policy," my talk would have ended here, but as you know, it is: "India's Foreign Policy—*As I see It.*" So I have something more to say and I hope you will bear with me for yet a little while. This brings me to consideration of the foreign policy pursued to-day by the Western Nations in Europe and America. Of course most of you are familiar with it, but viewed in the light of what I have said in regard to India's policy, it has an added significance.

What is the foreign policy of the West? I think it can be described in just a few words, namely, "collective security" and "Peace through strength." The nations of the West have indeed very good reasons for wanting to obtain peace and security in an entirely different way from India's. Twice during the last forty years they stood in mortal danger of losing everything they held dear and were on the verge of total annihilation. The untold sufferings they had to endure have left such deep scars in their mind and body that they have, therefore, pledged themselves not just to wish for peace, but to work—and if need be to fight—for it with all their strength. Their stern and realistic policy, which is prepared to go even to the extreme length of manufacturing and accumulating the much dreaded atom and hydrogen bombs, is the natural outcome of their careful study and observation for years past of the mind and mood and conduct and character of Dictators who simply will not let the world alone. The first World War and the second Great War might never have taken place if it were not for the fact that Germany saw developing all around her neutralist and pacifist nations whose love of peace at all costs had so blinded them to their responsibilities that they allowed their defences to be hopelessly neglected, with the result that they were at first a temptation and then a prey to the armed might of Germany who felt that she had a mission in the world and that mission was to be its overlord at the expense of free nations everywhere. It was just a miracle that the world was saved on both those awful occasions by the concerted action of Great Britain and her Allies—but at what a terrific and tremendous sacrifice! The awful tragedies connected therewith, I know, are yet fresh and poignant in your minds and there is no need for me, therefore, to recite them. Who would after going through what Britain went through in the "Battle of Britain" want another dose of it by resorting to a policy of "neutralism?" It is not as though the Western nations

had not given neutralism a fair trial. Why is it that Belgium and Holland, are to-day members of the North Atlantic Treaty Organization? It is because their neutrality was twice within living memory ruthlessly violated by armed aggression. America, which is to-day the most powerful nuclear-armed nation in the world, was isolationist not many years ago but was shaken out of that position during the last Great War by the conviction—following her bitter experiences at Pearl Harbour—that her liberty and freedom and all the things that she held dear in life were at stake. I think I must mention here my own impressions of the attitude of Britain to war as I saw it as an Indian when I came here to qualify for the Bar many years ago. It was some years after Britain had emerged victorious in the 1914–1918 War, which was regarded as “A War to end all Wars.” She had fought in that war—as she always does for a universally held great cause—as no nation or country could that evil and barbarism should not triumph—and when peace came at last she wanted to hold tight to it. She was rapidly stripping herself of her arms and armaments almost to the point of danger as an example to other nations with the result that in 1939, when the new danger to the peace of the world came from Nazi Germany, she was not ready and would have given anything for the crisis to have passed. The late Mr. Neville Chamberlain, who was Prime Minister at the time, was not ashamed to own up in the interests of peace that the “mere idea of an armed conflict was a nightmare” to him. Indeed, that was how most Britons felt during those critical days and hoped against hope that the danger might be averted. Yes; they were all for “non-involvement,” “non-alignment,” “non-interference” and non-whatever-that-was-going! Although their world commitments would not permit them to declare openly in favour of “neutralism,” they must have wished in their hearts of hearts that it was possible for them to adopt even that. The word “co-existence” was not in existence at the time but had it been in use I believe they would have even wanted to clutch it for what it was worth. But, what mattered then—and this is important and I would like India to take particular note of it—was not how Britain felt about it all but what Hitler had to say or do. He set the tempo and the tone and all that mattered to him was that Nazi Germany was strong and prepared, while others were weak and wavering, and that the time had come for him to strike which he did setting the whole world on fire. The point I want to make here is that it is all very well to talk of “non-involvement” and “co-existence,” but what if the other fellow aggressively bent will not let you have any of it and regards your well meaning slogans as cracks in your armour, as did Hitler in the case of Britain and her Allies and Mussolini when he flouted the League of Nations by his aggression against Abyssinia?

COLLECTIVE SECURITY

If I have shown a tendency to favour the idea of "collective security" and "Peace through Strength," I would like you to know that I do so with good reasons. I realize as most of you do here that but for this strong and realistic attitude adopted by Britain and her Allies following their bitter experiences, the world might be a different world from what it is to-day. Hitlerite Germany would have succeeded in effecting a junction with Tojo-dominated Japan somewhere in India, and if this had happened—and it very nearly did—there would have been no Afro-Asian Conference of 29 coloured nations to sit in judgment over their saviours, as these nations would not be independent as they are at present to be able to say or do what they liked. I have also a personal reason for favouring the idea of "Peace through Strength." When I was a small boy at school at Erode in South India many years ago, there was a bully who delighted in teasing other boys by picking up quarrels with them for no reason at all and then raining blows on them with his fist. They all used to run helter-skelter whenever he approached them. One day I saw him approaching me and I knew, of course, what his game was. I did not move from my position, but grabbed two big stones—one in each hand—and dared him to come near me. He beat a hasty retreat—glad to escape from my atom and hydrogen bombs! I think his aggression was halted from that moment. This should illustrate in a way the deterrent value of the real atom and hydrogen bombs. The fact that Britain and America possess them does not make them warmongers any more than the anti-atom-bomb neutralists. They are for defence and that too in extreme emergencies when aggression gets out of control so as to be a very grave menace to the peace and freedom of the world. No peace lover need be afraid of them. They provide a comfortable feeling of security to nations engaged in peaceful pursuits who happen to live in the midst of man-eating tigers in the same way that a British planter in Kenya feels comfortable when he has a revolver under his pillow when he goes to bed as a protection against the Mau Mau terrorists. These terrorists—as well as the Chinese terrorists in Malaya have learnt—as you may know—to respect the revolver-armed planters sufficiently to give them a wide berth!

To get back to "collective security" and "Peace through Strength." The ideas contained in these two slogans were not so much in evidence during the last two World Wars as they are to-day. The emphasis then was on "balance of power" and Treaties such as the "Entente Cordiale" aimed at ensuring balance in Europe. German militarism is now practically dead as Sovereign West Germany is now a member of NATO and,

therefore, is not likely to drive Europe crazy again. The greatest danger to World Peace, as you know, is Soviet Russia. I need not tire you with details of her aggression except to state generally that nations that were once free and independent are to-day her satellites and half of Europe is thus unhappily submerged, never perhaps to rise as free nations again. It is the fear of this sort of thing happening to the remaining free nations in Europe that gave birth to NATO, the embodiment of "collective security" and "peace through strength." Mr. Nehru criticized NATO at the Afro-Asian Conference as "one of the most powerful protectors of colonialism." I do not see where colonialism comes into this at all, as there are no colonies in Europe except the colonies which now go under the name of East Germany, Poland, Czechoslovakia, Rumania, Hungary, Bulgaria, Albania, Estonia, Latvia, and Lithuania which virtually live and move under the stern direction of Soviet Russia. Of course, Mr. Nehru is right when he says that these satellite countries are not colonies as he understands the term "colonies." They are in fact a lot worse; for while colonies of the old order are fast disappearing by becoming independent nations like India, Ceylon, Burma, Pakistan, Indonesia, Sudan, Tunisia and the Gold Coast, the new Russian controlled satellite colonies are doomed and may never be independent again. If by some freak of nature, India were transported to Europe from her present safe moorings in Asia where British and American influence in the military sphere is a check on Communist China's expansionist and subversive policy—and planted right under the nose of Soviet Russia—say sandwiched between Poland and Czechoslovakia—I wonder what Mr. Nehru's attitude to NATO would be. The difference in the outlook on "Peace" between the Western powers comprising NATO and India is due to the fact that the West was treated to a blood bath in the last war while India was sufficiently far removed from the scene to be unduly disturbed in mind or body. The West—going as it did through fire and hell—cannot afford to take a theoretical or philosophical view of peace and rely for its security on the doubtful protection envisaged by "neutralism" or "isolationism." Strength must be matched with strength, especially when your adversary is numerically and militarily superior and whose intentions of "smash and grab" have been so clearly and unambiguously made known to the world in the manner Soviet Russia has consistently done. Mr. Nehru's approach to peace through negotiations is of course commendable, but side by side with negotiations are also necessary stern military precautions that the West has been compelled to take in its realistic attitude. If Mr. Chou En-lai of China had put on his garb of peace on the occasion of the Afro-Asian Conference and expressed his desire to be at peace with all countries—great and small—

with the promise of non-aggression tacked on to it, it was not because he was won over to peace by the courtesies and smiles of his Asian and African colleagues and the nice words that were exchanged, but because of the fear at the back of his mind of the growing strength of the United States of America in South East Asia and the invulnerability of that area following the Manila Conference which resulted in the birth of the South-East Asia Treaty Organization which comprises among other nations, Great Britain, France and the United States of America, which together are more than a match for any pranks that Communist China may be up to in the future. It is a defensive pact and should cause offence or alarm to no nation bent on living in amity and concord with its neighbours.

What SEATO is out to accomplish in South East Asia, NATO has already accomplished, I believe, in Europe as further Russian aggression has been so far halted. The Austrian Treaty, which has been long overdue and which Russia would not simply look into, is at last taking shape on the initiative of Russia and it may not be long before it is concluded with the consent and approval of the other three occupying powers, namely Britain, America and France. Russia is also anxious for a four power Talk which is a good sign, and the long looked for peace in Europe which the world so sorely needs may, therefore, not be far off. I believe that what has influenced Russia to climb down from her stiff unbending attitude is not the neutrality of Switzerland or Sweden but the ratification of the London and Paris Agreement which has made NATO a stern reality now—and the echo of the nuclear experiments from far off Nevada which cannot but strike terror into the hearts of all aggressively minded Dictators.

THE ATOM BOMB

This reminds me that Russia has been advocating for some time the complete abolition of atom and hydrogen bombs as a first step to general disarmament and ultimate peace. Many nations, including India, have taken up this cry on humanitarian grounds. The horrors of nuclear warfare are of course real, but there never need be a war of this nature at all if Soviet Russia, apart from merely wanting America and Britain to destroy their stock pile of atom and hydrogen bombs, would also consent herself as a practical gesture to reduce her own enormous armies which, without being supported by nuclear weapons, are capable of overriding the whole of Europe over night. The only deterrent to her doing so is—as Sir Winston Churchill always maintained—the atom and hydrogen bombs in the hands of America and Britain. Those who are engaged, therefore, in the act of forcing America and British to destroy all their nuclear weapons without taking into account Russia's immense

superiority in conventional weapons—not to speak of her stock of atom and hydrogen bombs—are consciously or unconsciously helping Soviet Russia to maintain her position as the strongest nation in Europe that she may continue to be a menace for all time to the peace and liberty of the world. So much then for the West.

Let me shift the scene back to the East again for just a few seconds and make a fleeting reference to India's attitude to Formosa which is to-day the world's worst headache. Mr. Nehru strongly maintains that there is only one China, and that is Communist China and that Formosa must be returned to her. But America has all along recognized Nationalist China functioning from Formosa under the leadership of Chiang Kai-shek as the lawful Government of the Republic of China. The United Nations concur with the American view. The theory of two Chinas seems to find favour in Britain as far as I can see. Sir John Kotelawala of Ceylon, speaking at Bandung, expressed the view that Formosa belongs to Formosa and the question of its Government by whom or how ought to be decided by a plebiscite. I do not feel competent to express any opinion on this, but let me pose a hypothetical question for Mr. Nehru. The lawful Government of India to-day is the Congress Party's Government of which Mr. Nehru is the leader. In the recent elections at Andhra in South India, the Communists—though unsuccessful—increased their poll by about a million votes. Supposing they improve their position further in a few years—and I have no doubt they are going to do it—and then by their own efforts or with Communist aid from outside drive Mr. Nehru and the Congress Government away from India who take refuge—say—in the Andaman Islands in the Bay of Bengal. Knowing that the Congress Party has still many strong supporters within India and the principles for which this party stands are the principles that appeal most to the generality of the Indian people who are not happy under the Communist regime, would not Mr. Nehru and the Congress Party who have temporarily set up a Congress Government in the Andaman Islands do everything in their power to get back to India on their own steam or with the proffered help of a friendly power? It would be indeed interesting to know Mr. Nehru's answer to this question.

AFRO-ASIAN CONFERENCE

An address on India's foreign policy would not be complete without some reference to the recent Afro-Asian Conference at Bandung. The six points of Mr. Chou En-lai relating to peace and non-aggression which were the basis of his agreement with India previously are, of course, deserving of very careful consideration, suggesting as they do a change of

heart, but until they are translated into deeds, they will not be worth the paper they are written on. The late Mr. Neville Chamberlain, you will remember, came back happy from Munich in 1939 flourishing a piece of paper in which Hitler had categorically stated that he wanted peace and that he had no territorial designs or ambitions at all. It turned out, as you know, that what he wanted was not peace at all but a piece of this and a piece of that! Again, just at the same time as a peace mission from Japan was on its way to America to discuss peace, Pearl Harbour was brutally and shamefully bombed by the Japanese Air Force. With bitter experiences such as these—the memories of which are still so fresh—it is not to be wondered if China's promise of non-aggression—while she has not yet pulled out of Korea and Indo-China—is not taken too seriously by those to whom it is addressed. However, both America and Britain—I am glad to see—have taken the necessary initiative to probe into the sincerity of Mr. Chou En-lai's Bandung offer to negotiate direct with America for a settlement of the Formosan problem. A cease fire agreement there to start with—let us hope—may be a prelude to a peaceful settlement of the other difficult issues involved.

And now to conclude. As long as NATO and SEATO are live organizations, there is no danger at all to World Peace from any quarter. India's neutralism may appear to have been successful up to a point, but I doubt very much if it is capable of ensuring for India continued peace if ever Britain and America pull out of South East Asia or become non-committal. As to India's reliance on the United Nations for her peace and security, I wonder if this world organization can survive one single minute as an instrument for peace if America and Britain follow India's example and become neutrals and refuse to contribute their quota of forces to the United Nations in times of emergency. India's neutralism, therefore, based as it is on the United Nations remaining strong and efficient militarily, presupposes—strangely enough—strong and adequate military contributions to this body whenever aggression lifts its ugly head by non-neutral nations! This is an anomalous position which India as a rising power of great promise can ill afford to assume consistent with her safety or honour. One word more and I have done. If this address of mine has helped in any way to import some realism into India's outlook, then the time and thought I have spent on it will not have been in vain.

Sir JOHN BEAUMONT: We are very much indebted to Mr. Chinna Durai for his lecture. He has told us that the foreign policy of India is

neutrality, or non-involvement, and he has offered some very shrewd criticism on what that policy is likely to lead to. The fact of the matter is, that a policy of neutrality may be a very satisfactory policy in times of peace, but its preservation obviously does not depend entirely on oneself. At the beginning of this century this country had no alliances at all. We were in a state of what Lord Salisbury called "glorious isolation," and then we found that our most likely potential enemy, Germany, was arming in such a way as to show that she was going to attack us, particularly on the sea, and so, to strengthen ourselves against Germany, we entered into understandings with France and Russia. No doubt Mr. Nehru may say—"What was the result, a world war ten years later." That was certainly a result, but I do not know that it was a result of the alliances. It may very well be that we should have had a war with Germany, indeed I have not the least doubt we should have had a war with Germany, somewhere about 1914, and if we had not had any Allies we might have lost it instead of winning it. Basically the problem is perfectly simple. If I have property which my neighbour wants, and my neighbour is stronger than I am and says, "if you do not give me that property I shall take it," there are only three courses open to me. I may proceed by arming myself to become so strong that he cannot take it from me; or I may get friends to come and help me, and with their assistance be too strong for my opponent; or I may say that I am not going to fight, if my opponent wants this property he may have it, thus adopting a policy of non-violence. But you would find it very difficult to persuade the English people to adopt that latter policy. I do not think anybody would have been prepared to hand over our colonies, which was of course what was wanted in 1939, to Germany; after all, other people besides ourselves were involved. Mr. Nehru will find that, although his neutrality may be very satisfactory as long as nobody is being aggressive, he will either have to fight or give way if somebody does make demands upon him. Supposing, for example, that Pakistan, receiving military equipment and help from America, considered herself stronger than India, and said to India, "Now out you go from Kashmir, I have always said that it is mine and I am going to take it." Well India would have either to leave Kashmir or fight; there is no other alternative. You might, of course, suggest that Pakistan should adopt a policy of non-violence, but if she did not happen to accept that policy there is no other alternative but to fight or give way, and, as Mr. Durai has said in his lecture, that is the real danger of a policy of neutrality. When the point arises where you have to either fight or give way, it is better to have allies if you are going to fight than to have nobody, otherwise you may have to give way when you do not want to. Now the subject is open to discussion.

QUESTIONS

Miss P. S. HARLEY asked the speaker what the attitude of the people in India was to Mr. Nehru's foreign policy. Were they in accord with his policy of non-involvement?

Mr. CHINNA DURAI replying said: As far as I can see Mr. Nehru's Policy is being followed generally throughout India, and he is being praised to-day for following a policy that has brought to India a great deal of prestige from every quarter. Even the Press seems to raise no criticism of India's neutral attitude in foreign affairs, and perhaps I may be a lone voice in raising this issue. People seem to think that India is setting a case for a new kind of thought in the matter of peace, that a new look has come about, and they seem fascinated by the idea that Gandhi obtained independence for India by a policy of non-violence, and that Mr. Nehru is in great demand as a peacemaker. So, at the moment, the people in India seem very contented that things are going so exceedingly well, but I take a longer view, because, supposing Britain and America pulled out of south-east Asia, what happened in Tibet could happen again on a much larger scale.

A member of the audience asked whether, as India was trying to be a socialist country and follow socialist policies, it might not be the case that she was so enamoured of everything Russia did that she was trying to emulate her?

Mr. Durai replied that although Mr. Nehru favoured a socialist policy he did not encourage communism in India. "Mr. Nehru," he said, "feels that it would not be fair to expect military aid from Britain and America being, as she is, an independent nation. Not being in a position to strengthen India militarily at this juncture, Mr. Nehru probably feels that the best policy would be not to offend Russia or China until India could be made militarily independent."

Miss E. GEDGE stated that when she was in Rumania at the outbreak of the 1939 war, it seemed to her that it was a very small minority in that country that had got hold of power and entangled the rest of the people in a terrible danger, and were strangling their desire for peace and freedom. "When I arrived in India as an evacuee," she said, "it seemed to me that the position there was much the same as in Rumania. Talking to Indian friends I came to the conclusion that again it was a small minority, compared with the huge population of India, that had got hold of power and was pulling the noose tight. I would ask you, sir, is it not still the case that these extremist elements in India are in the minority?"

Mr. DURAI: India, as you know, is a country where illiteracy is very high, and those who are in power to-day are people of a high degree of education. These people are few in number, and they will be few for a considerable time to come, and the lead they set will be blindly followed by the people as a whole because of this and the name and fame of the personalities behind India's leadership. A man who has done something for India is set up as their leader, and what he stands for is right. So, in this way, the minority can easily become the rulers of a nation.

Lord BIRDWOOD, moving a vote of thanks to the speaker, said that on the 31st March, he had listened to Mr. Nehru's speech in the Lok Sabha, to which Mr. Durai had referred in his address. "I think that I would start by an assumption that fear is now so predominant in the minds of leaders on either side of the Iron Curtain as to make the prospects of a third world war almost a hypothetical issue. If that be true it does mean that all we have done is to transfer our warfare from the battlefield to the conference tables; and in that sense I think we should view and judge India's neutrality. The fact that we have abandoned power, in the physical sense, as the method of achieving finality does not mean that we have abandoned the prerogative of condemnation when and where we feel that it is justified, and indeed, required. It is that abandonment of the faculty to condemn on which I would criticize India's neutrality. The weight of Mr. Nehru's influence in the world is rather on the side of avoiding condemnation where condemnation is necessary. We have seen how nine European countries went down like ninepins in circumstances in which they were unable to protect themselves, and we have seen that this kind of moral issue remains uncondemned. I think that this is the disturbing point of Indian neutrality. I would like to thank the speaker, not only for his analysis of Indian foreign policy, but also for his realistic observations on European affairs."

Scientific Research in India

By Professor Sir ALFRED EGERTON, MA, DSc, FRS

Professor Sir ALFRED EGERTON, MA, DSc, FRS, delivered the Thomas Holland Memorial lecture to a joint meeting of the Royal Society of Arts and the East India Association at the Royal Society of Arts, John Adam Street, Adelphi, W.C.2, on Thursday, 19th May, 1955. The lecture, which was entitled "Scientific Research in India," was illustrated by lantern slides. The Rt. Hon. Viscount WAVERLEY, PC, GCB, GCSI, FRS, presided.

Professor Sir ALFRED EGERTON said: When the Council of the Society did me the honour of inviting me to deliver the Holland Lecture on *Scientific Research in India*, I accepted with some thrill because of the opportunity it provided to present some impressions which two visits to India in recent years have made upon me. However, I reflected that there are many wonderful people who have spent their lives in the service of India who would be much more competent than I to speak to you. So in all humility I will say what I have to say on a very big subject, India—humanly, the biggest member of the Commonwealth with its 360 million inhabitants scattered in about 500,000 villages; (less than ten per cent in large towns).

India—on which the sun shines with great vigour on its million square miles of land, delivering energy to the tune of about a thousand million horsepower; India—through whose valleys flow mighty rivers delivering water enough to irrigate much of the land, and to supply millions of kilowatts of hydro power; India—with its precious resources: oil, coal, iron ore, mica, ilmenite, bauxite, zircon, manganese and gold and monazite sands, which are rich in thorium and uranium; India—rich too, in wisdom rooted in ancient philosophy, with a spiritual tradition reflected in its art and culture.

My object to-day will be to provide information on that part of the recent efforts to use science to help in solving India's problems with which I have become acquainted. The Prime Minister of India, on one occasion said: "It is not easy to give a new face to so large a country which contains one fifth of the world's population. Perhaps the only way of doing this difficult job is by creating among the people a temple of science so that it takes away the rut of sluggish habit and ushers in an era of blissful prosperity." As Mr. Nehru has seen, science holds the key to India's future. The great moral qualities which India possesses depend on age-long

traditions: what is good in the old fabric has to be woven into the new, what is retained and what is abandoned will be for science to determine.

India has a plan—a five-year-plan initiated in April, 1951, to raise the standard of living of its immense population. The purposes were:

(a) to achieve as great an increase in agricultural production as possible; and

(b) to prepare for substantial industrial expansion.

This table gives some idea of the development schemes under the plan:

TABLE I						<i>Crores of Rupees</i>	<i>Per cent</i>
Agriculture and Community development ...						361	17.4
Irrigation and Power						561	27.2
Transport and Communications						497	24.0
Industry						173	8.4
Social Services						340	16.4
Rehabilitation						85	4.1
Miscellaneous						52	2.5

The emphasis is on the irrigation schemes to increase in the five years the area under irrigation by fifty per cent, that is from fifty to seventy-six million acres, and to more than double the hydro-power to 3.2 million kilowatts. Industrial expansion was to be assisted more vigorously in the second stage of the plan. In the preliminary stage, expansion was intended to be met by private enterprise rather than through public expenditure. One of the objects which the plan set out to achieve is "the development of a scientific temper in the people."

This lecture is not on India's plan, though it is a great project and one which, it seems, is being effectively carried through with more rapid success than the plan which was despotically operated in the 'twenties by the U.S.S.R.

It is not possible to outline the innumerable ways in which science can assist India's plan, but it is nevertheless important for us, in reviewing India's scientific effort, to recognize that the plan is in operation. Expenditure on research in India is still far less than the proportion of the National Income which such countries as U.S.A. and United Kingdom are spending on research. Some people thought too much had been spent, but in comparison with the great industrialized countries, it was so far really quite little. It has recently been decided to increase expenditure for research.

The fruitfulness of science, however, is first and foremost not a matter of money, but of men, and very unique men (or women). One man suited

to the problem will succeed where no amount of equipment, hands and even brains will suffice without the special gift. That gift often develops in a man because of the circumstances of his life. India has fructified and given that special twist to many a British scientist. Many, who became Fellows of the Royal Society, started in the service of India. I shall only mention two of such—an early Fellow of the Royal Society, born in the Western Colonies, was Governor of Madras for five years round 1690, and gave his name, Yale, to the great American University. Another very distinguished Fellow, living two hundred years later, Sir Thomas Holland, gave his name to these lectures, and it is a special privilege for me to be giving one of them, because he was a personal friend and a Rector of my College. Holland was appointed as a young man of 21 to the Geological Survey of India, and became the Director in 1903. He was a man of outstanding energy and initiative, and did great things for the development of India's mineral resources. He became Professor of Geology in Manchester in 1909, but returned to India in the first war, organized the Munitions Board and was on the Viceroy's Executive Council. He initiated the formation of the Indian Industrial Commission and, quoting from an article in the Indian Journal *Current Science*, 1943, "how much more prepared would India have been if the chief architect of the report of this Commission had remained to implement it, and to provide the fully developed chemical and industrial sciences which it envisaged." I quote this to emphasize how important is the *individual*. Nothing much happened after Holland left in 1921, until Bhatnagar came on the scene twenty years later.

Nature, in the Indian scene, has set problems which have intrigued the minds of many British men of science, excited their vision and imagination, and activated them to exercise a certain genius of their own. It has done the same to its own men of science. A distinguished Indian engineer Ardaseer Cursetjee was elected a Fellow of the Royal Society in 1841; Ramanujam, in his short span of life established a reputation as a mathematical genius of the highest order; Sir C. V. Raman, as a great physicist; Sahni, a distinguished botanist, and so on. There is no dearth of scientists of Indian nationality of high calibre. Perhaps one could remark that in the mathematical and physical sciences they have been particularly eminent. There have been excellent young engineers and chemists, but the gifted ones must have gone into managerial work.

Amongst the more brilliant of the Indian chemists was Shanti Bhatnagar, FRS—a man of quite extraordinary energy. It is of his work—not as a scientist, though he was an inspiring teacher and research worker particularly distinguished in colloid and magneto-chemistry—but as a scientific administrator of special genius that this lecture will

be chiefly concerned. Bhatnagar was appointed Professor of Chemistry in the University of the Punjab, Lahore in 1924.

In the days of the East India Company, botanic gardens were established in various centres where the plants of India of value and interest could be collected and studied—the famous garden at Sibpur in Calcutta has such origin. Then under the Government of India, the Geodetic and Trigonometrical Survey, the Meteorological Department and other scientific services were established. Nevertheless, the Industrial Commission, with which Holland had so much to do, reported in 1918, that the position of research was quite unsatisfactory and that in its interests measures should be taken to promote it. Nothing very great happened: the Government of India established in 1935, the Industrial Intelligence and Research Bureau with the object of laying the foundation on which a research organization could later be constructed. A council was formed, but the finances provided were meagre (about Rs. 2 lakhs). When the Second World War broke out, the need for making India industrially self-sufficient was urgent, and in 1940, the Government established a Board of Scientific and Industrial Research. It was at this stage that Dr. Bhatnagar was brought in from Lahore by the Viceroy, Lord Linlithgow, and he was appointed Director and Scientific Adviser to the Government of India. In 1941 an Industrial Research Utilization Committee was set up to advise generally on the methods of utilizing the results of researches and the terms of their release to industry. The laboratories of the director were shifted to Delhi in 1942. The Government created a fund called the Industrial Research Fund, and the Council of Scientific and Industrial Research was constituted as an autonomous body under the Registration of Societies, Act XXI (1860) to administer the fund.

The valuable work of the Council and the Director during the war, and the connexions established with the leaders of industry, led the Government to make a grant of Rs. one crore for the equipment and construction of a chain of research institutions. Even as early as 1942 proposals for a National Physical Laboratory and for a National Chemical Laboratory had been accepted.

The governing body of the Council, in December, 1943, appointed a Research Planning Committee, which pointed to the need for expansion of research activities and to get industry more closely interested. The Industrial Utilization Committee was replaced, in 1947, by a more compact body, the Industrial Liaison Committee, and this has since been superseded (1953) by the National Research Development Corporation.

Although much was started before the attainment of Independence, it was after 1947 that scientific research got the full recognition and encouragement due to it. Scientific research was announced as a portfolio directly under the Prime Minister in August, 1947, the Department of Scientific Research was created in June, 1948, with Bhatnagar as Director and the Ministry of National Resources and Scientific Research was set up in January, 1951, Bhatnagar becoming the Secretary responsible to the Minister. Under the stimulus of Mr. Nehru, the development of the whole scientific organization in India has been remarkable.

The pace of the establishment of the national laboratories was accelerated and new laboratories were planned and built. Bhatnagar's tremendous energy had full vent. He travelled far and wide to get information about the planning of laboratories. Concurrently with building, the best equipment was sought from many countries, staff was recruited and research started without waiting for buildings to be completed. The numerous scientific committees of the Board advised on schemes of research in many centres which were then assisted by the Council. Everything went ahead without waiting for finance; that, with Bhatnagar's powers of persuasion, seemed to come at the right time before any hold-ups occurred. During the five years following independence, 12 new laboratories were completed, equipped and established; 328 research schemes were financed, 207 Indian patents (and 21 foreign patents) were filed, and over a thousand research papers communicated.

Such was the history when I received a letter last Christmas year to act as chairman of the Committee to review the work of the Council and to report to the Prime Minister. There had been a reviewing committee in 1947 of which Sir Ardeshir Dalal had been chairman, they had recommended that adequate arrangements should be made for pilot plant work in the national laboratories, that research schemes should be clearly defined by the Research Committees, that a National Development Corporation should be established and that a board of engineering research be set up under the Council. Action had been taken on all these matters. I felt that for an Englishman to be invited to be chairman of the second reviewing Committee was a courtesy and that the invitation should be accepted, so last February I arrived in Delhi and six weeks were allotted for the task. Our duty was "to conduct a review of the Council's work and to take stock of the achievements during the past five years and to consider lines on which its activities should be developed and expanded in the future."

Our first decision was to review as many of the laboratories as possible and obtain a general impression of the work being done in them. We

had about a day for each place; we could, of course, only get a quick impression, the time which could be given was not at all related to the variety and importance of the work which the staff of each laboratory were keen to show us. The following is a list of the laboratories:

1. The National Physical Laboratory, New Delhi.
2. The National Chemical Laboratory, Poona.
3. The National Metallurgical Laboratory, Jamshedpur.
4. The Fuel Research Institute, Dhanbad.
5. The Central Glass and Ceramic Research Institute, Calcutta.
6. The Central Food Technological Research Institute, Mysore.
7. The Central Drug Research Institute, Lucknow.
8. The Central Road Research Institute, New Delhi.
9. The Central Electro-Chemical Research Institute, Karaikudi.
10. The Central Leather Research Institute, Madras.
11. The Central Building Research Institute, Roorkee.
12. The Central Salt Research Institute, Bhavagam.

A table was inserted in our report which gives information about these places at a glance. The figures show that they were erected and got going extraordinarily quickly; they were spacious; the whole was obtained at a very reasonable cost—about Rs. 6 crores and 3-4 crores of assets (donations in cash, and in land and buildings); they were established with well chosen staff, up to a complement of about 3,000, of whom about a quarter were scientific staff.

Some may have thought that the laboratories are on too large a scale in comparison with the size of the industries of India. At present that may be so, but they are there to help India to industrialize and as expansion occurs they will by no means be out of scale. Our printed report was presented by the Prime Minister to the House of the People, on 6th April last year.

May I take you next round the laboratories and institutes.

THE NATIONAL PHYSICAL LABORATORY

This was a particularly fine building surrounded with lovely gardens. The laboratory has been very carefully designed for its purpose; elegant, well sited and supplied with sufficient land for all its likely needs in the next few decades. The air-conditioned auditorium, holding 840, in which large meetings can be held was a wise inclusion. There are few if any institutions of this character in the world which are so designed that the work is housed as conveniently. Most similar institutions consist of widely scattered buildings, which are consequently less easily directed.

It is not intended to provide facilities for routine testing. There are places for that in Calcutta and elsewhere, and there is an India Standards Institution. A National Physical Laboratory should "set the standards of accuracy for the nation" (a remark made by Lord Moulton, FRS, when commenting many years ago on the work of the National Physical Laboratory, Teddington), but it should not become an establishment for routine testing for all and sundry. It can, however, be very useful in helping to raise the quality of the products of industry, and to avoid lack of uniformity or adulteration. It is very fortunate that, at the outset, the laboratory has been able to have a man of such scientific eminence as Sir K. S. Krishnan, FRS, as its first director. Various lines of research of a fundamental kind were being pursued on the director's own initiative.

It was interesting to find progress in the direct utilization of solar radiation. This seems to be worth while, particularly if it can be employed to provide energy for the cooling of large buildings. Problems of air-conditioning and refrigeration are obviously of great importance in India and will need the attention of the laboratory.

The Director has an able Scientific Deputy Director and an Administrative Assistant, so that he can be as free as possible for his scientific work.

It was good to find that the laboratory was not trying to copy all that other National Physical Laboratories and Bureaux are doing, but to concentrate on those items which are most likely to serve India's needs. The National Physical Laboratory also forms the centre for Defence Research, and it houses the Central Science Library and Documentation Centre.

On our second visit to the laboratory it was the occasion of Bhatnagar's sixtieth birthday. I unveiled a portrait of Bhatnagar by an Indian artist which now hangs in the library of the laboratory, and referred to Bhatnagar as a master builder. Like the work of another, Christopher Wren, there was a stamp of originality as well as a unity of conception about the whole series of laboratories that he had brought into being so incredibly quickly. The National Physical Laboratory was Bhatnagar's favourite of the many buildings and he had so made it that it would become a real centre of activity in India's capital, and indeed the auditorium is used for concerts as well as for meetings and entertainments. Science was to be set right to the fore in the social order.

The Prime Minister was present, and spoke at the meeting that day, in the auditorium, and afterwards joined the tea party set out in the beautiful garden. Looking back on this now, it is gratifying that Bhatnagar who died suddenly on the 1st of January this year, should have experienced on his birthday such genuine expression of India's appreciation of his great work.

CENTRAL BUILDING RESEARCH INSTITUTE

Next we leave the National Physical Laboratory and take a long drive a hundred miles north of Delhi, *via* Meerut, to Roorkee to visit the Central Building Research Institute. This was a very good attractive modern laboratory, sited to be between Delhi and Dehru Dhun, the great Forestry Centre, and alongside the Thomasson Engineering College. Dr. Billig, the Director, was an Austrian engineer, particularly known for work on pre-stressed concrete. He had developed a shell house of cantilever construction suitable for tropical conditions. In any modern state, a place in which problems relating to buildings can be studied is a necessity. Each country has its own special problems. For instance, the supply of heat to buildings is a highly important matter in northern countries, but in India the removal of heat is of more importance. It was noted that a review had been made of the "Scientific principles underlying the design and construction of buildings in tropical areas." There is much that can be done by further research in this field, which involves extension of physiological experiments as well as experiments on materials and the physical characteristics of buildings.

CENTRAL ROAD RESEARCH INSTITUTE

India's roads are fascinating; they have not yet become runways for mechanical boxes like our modern roads. Indian life is there on the highway with all its colour and romance; pilgrims, bullock carts, families on trek, camels, elephants, monkeys. Fine trees of many varieties line the highways. There is usually a central track, some of which is now cement or bitumenized, with a soft dust-laden bullock track at the sides. The motor and the bullock cart are not good companions, neither is the rule of the road highly developed! In spite of the dust which is kicked up between the two, good temper seems to prevail.

The Central Road Research Institute is situated at a spot where the road to Bombay leaves Delhi. The traffic can be diverted along either one of two test tracks which pass through the grounds of the Institute. Surface dressings of various kinds can thus be tested. There are many problems to be tackled, as distances are great; local materials must be used for road making. Local laterites of certain types can be used if treated by methods which the Research Institute has successfully developed. The Institute works closely with the Roads Organization of the Ministry of Transport, the Public Works Department of the Government, the India Roads Congress and the Standards Institution, and has proved not only useful as a means to investigate road problems but other problems

relating to the use of cement, concrete, bitumen, and so on. In India the 14,000 miles of highway and part of the 250,000 miles of roads are mostly a Public Works responsibility: there is little done independently by large civil engineering contractors.

The CRRI has four large bays, each of floor space 7,700 square feet, at the back of the administrative block which has a library, museum, auditorium, canteen and conference room. The Institute has been in the active charge of Dr. E. Zipkes, a Swiss engineer, but his term of office has expired.

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

On the way to the National Chemical Laboratory at Poona, we shall call at Bombay for a moment and visit Dr. Bhabha, FRS, at the Tata Institute of Fundamental Research. Dr. Bhabha is a nuclear physicist of international reputation who has recently been appointed Chairman of the International Commission for the Development of Atomic Energy for peaceful purposes which is to meet at Geneva. He is Chairman also of the Indian Atomic Energy Research Committee, and most of the work for the Committee is being carried out in the Tata Institute where there is a high energy accelerator and a betatron.

The Tata Institute expanded into the old Bombay Yacht Club building some years ago. A new large modern laboratory is being built for the work of the Atomic Energy Committee on the coast, but the cosmic ray and other interesting physical researches relating to Dr. Bhabha's work will continue to be done at the Institute by the young and very active group of research men that he has with him.

India possesses great resources of thorium and uranium concentrated by natural processes in the monazite sands of the south-eastern coasts. The necessary steps are being taken towards the expansion of chemical industry so that these ores may be treated.

NATIONAL CHEMICAL LABORATORY

The National Chemical Laboratory is situated outside Poona City, not far from the University of Poona, nor from the big army training and educational centre. It is a very fine laboratory, excellently designed. There has been plenty of land acquired (475 acres). Housing accommodation can, therefore, be provided on the site. Laboratories, library, auditorium, museum, workshops, stores, offices, cafeteria and accommodation for the director, are all included in the main building. There is a small out-building in which pilot plant work is being done, but

further provision for pilot plant operations was needed. The laboratory is very well equipped with modern apparatus for chemical and physico-chemical research.

The Director of the laboratory is Professor G. I. Finch, FRS, from the Imperial College, London. He succeeded the late Professor McBain, FRS, in 1952. The main object of the laboratory is being kept in view, namely to "advance chemical science and to apply chemistry for the welfare of the people." The progress of chemical industry depends on the pool of knowledge gained from fundamental work; if the pool dries up, industry has nothing to draw upon. We agreed with the Director that at least thirty per cent of the total effort of the laboratory could well be directed towards fundamental research work.

The Biochemical Division was under the able direction of Dr. Damodaran, many interesting studies in protein chemistry, and on fermentation were in hand. The National Collection of Industrial Micro-organisms is housed in the Institute.

In the Chemical Engineering Division the work is divided between the economics and costing of processes, pilot plant work and fundamental studies of general processes, such as drying, mixing, and so on. It is intended to extend the pilot plant work. This is necessary in a country where the chemical industry is not highly developed. India in 1948 employed only 1.8 per cent of its labour force in industry, and only 6.5 per cent of the national income was from factories. The industries of India are developing, but they need laboratories such as the National Chemical Laboratory to help them develop. The laboratories have first to gain the good will of those industries which exist. The industries being small are often not willing to undertake risks of development. This is where the National Research and Development Foundation which has been established can step in and help.

Many different investigations were in hand in the chemical engineering section, in the Division for Inorganic Chemistry, in the Division of Organic Chemistry, in the Division of Physical Chemistry, and in the Division for the study of Plastics and Polymers. The Chemical Laboratory is alive with work of such a varied kind that it is not possible to refer to it in detail here. About 150 inquiries on technical subjects are received from industry every month and are attended to through a special branch of the laboratory.

There is no doubt that this laboratory can become a great centre of chemical research, but we felt that it would be necessary that there should be close connexion with university centres, so that post graduates could come to do research work in the laboratories for their higher degrees when the subject of the work seemed suitable. It was good to learn that

collaboration with the University at Poona had been established, and that members of the staff of the laboratories have opportunity to teach their subject at post-graduate level in the university.

It is very important in laboratories with a set establishment that there should be a continual revivification taking place. In many universities this occurs naturally; young men of distinction as they graduate, come to research and if they show special promise, are found places on the staff or move out to posts as lecturers at other universities. There is a continual flow and refreshment, bringing with it the fructifying ideas of the young mind, centred round the professors or leaders of research. That is a very desirable state of affairs in which research can flourish. University research is centred round the chair; if the professor changes, the special branch of subject also changes.

It is less easy to provide for flexibility in an establishment. An establishment—a national laboratory or research institute—is organized round the subject. The director has to be a specialist and the staff have to be experts in the subject with which the institute deals. If, however, the director wisely does not always fill up all the posts available for his full complement of staff, and if he is in close touch with industry, universities and other bodies so that he can recommend research men for jobs elsewhere when suitable circumstances arise, then a flow can be maintained and incentives for fairly rapid promotion can be provided. Promotion should always take into account capacity and application. One has however, to qualify these observations. An establishment cannot well afford to lose all its experienced men, and it cannot retain them unless a certain security of tenure can be provided.

INDIAN INSTITUTE OF SCIENCE

We now go on to Mysore, calling this time at Bangalore on the way. The Indian Institute of Science at Bangalore was founded by Sir Jamshed Tata early in the century. He had obtained the advice of the Professor under whom he studied at University College London, Sir William Ramsay FRS. Professor Travers, FRS, who worked with Ramsay in the discovery of the rare gases became the first Director of the Institute. Later, Sir John Simonsen, FRS, lent distinction to the Department of Chemistry as its Professor. The Institute is partly supported by the Tata and other endowments, and partly from government sources. It has played a great part as almost the chief centre of research in India in the physical, chemical and engineering branches of science; it also provides education at the undergraduate level in electro-technical and other subjects. I was asked to be chairman of a small committee to review the work of the

Institute in 1948, and the other members were Sir Ben Lockspeiser and Dr. J. N. Mukherji. We felt that, although the Institute was not organized quite on the same lines as a higher technological college, such as Massachusetts Institute of Technology or Imperial College, London, it was nevertheless largely performing the function of such institutions and could well develop in such a way. Our recommendations were carefully considered in the ensuing year and most of them were put into effect. It was interesting to stop at the Institute on our way and to be shown some of the many developments there by the distinguished Director, Dr. Thaker, who is a well-known authority in power engineering. Sir C. V. Raman was a past Director of the Institute, and much of his work had been done in the Physics Department. He now has an attractive laboratory on the highest piece of ground in Bangalore from which he can survey the scene and which has been provided for him by private subscription. There he has installed his wonderful collections of minerals and coloured objects, and where he is happily continuing his studies along with some of his assistants.

CENTRAL FOOD TECHNOLOGICAL RESEARCH INSTITUTE

Mysore, about a hundred miles from Bangalore, is certainly one of the most beautiful and clean of small cities anywhere to be found, and one of its many palaces—the Chelavamba Mansion—has been acquired as the gift of the Mysore Government for the Central Food Technological Research Institute along with a considerable amount of land. There are eight divisions to the Department: Biochemistry and Nutrition; Food Storage and Preservation; Food Engineering; Food Processing; Microbiology and Sanitation; Fruit Technology; Quality Control; Food Information and Statistics.

The Director of the Institute is Dr. Subramanyam, a well-known food technologist. The palace is spacious and for much of the work has been well adapted, but the processing machinery and workshops need a less incongruous kind of housing and plans were in hand for building a new technological block.

The Institute is engaged on problems of great importance in a country growing food and consuming food on so large a scale as in India. Investigations are carried out on the properties of known and unfamiliar foodstuffs, the development of new processes and products, and on problems of food preservation under Indian conditions. It is a big field, and the Director has enthused his staff with activity. Much was being done to establish an Information section, because the work cannot be effective unless the knowledge is spread.

The work is so diverse that little impression can be given of it. Amongst many other things the Institute has developed a composite flour mixture, known as "Mysore Flour," consisting of a mixture of tapioca and groundnut flour which could relieve famine. The partial replacement of rice, wheat and other grains with tapioca, which yields three or four times as much starch per acre as cereal grains, and can also help to reduce wheat importation. The Institute has experimented on the effect of such replacement and has shown that the health of growing children does not deteriorate in consequence. There has also been developed a "synthetic" or vegetable butter milk. This is made from groundnuts and was used to feed children in distress areas.

The Institute provides a diploma course in fruit processing technology and so on, and is equipped for this purpose. It also carries out a considerable amount of testing and examination of food products in relation to control orders and so on. Six hundred factories depend on the Institute for advice on standards of quality.

On the way to Madras one flies over the Kolar Gold Fields, one of the world's deepest gold mines. The problems of mining in India, particularly coal mining, are going to be centred in a Mining Research Institute which is being erected near Dhanbad, and of which Dr. J. W. Whitaker, who was until recently Director of the Central Fuel Research Institute, will be in charge. When we visited Mysore, Dr. Bhatnagar had been helping to inaugurate a big new development at Nagpur; a plant for the beneficiation of low-grade manganese ores which promises to be of such value, so it was said, that it might pay many times over for all the expenditure which the Council of Scientific and Industrial Research had incurred.

Sir Shanti Bhatnagar's energy was such that as we went day to day from place to place round India's wheel he went up and down to and from Delhi on the spokes, and somehow managed to be present at nearly every centre we visited!

CENTRAL LEATHER RESEARCH INSTITUTE

Madras is an educational as well as an industrial centre. The University, the Medical Centre, the Engineering College, the Alagappa Chettiar College of Technology and so forth are well known. Leather being a great industry in the south of India, the Leather Research Institute is well placed at Guindy next door to the Technical College. It is a big fine laboratory with another rather similar building to house the model tannery.

The Institute's work is divided into (a) Chemistry, Physics; (b) Biology; (c) Tanning, finishing; (d) Information; (e) Chemical Engineering.

The Director, B. M. Das, is a well-known leather technologist, who was a pupil of Professor H. R. Proctor at Leeds many years ago.

Indian vegetable tanning largely depends on imported wattle bark and mimosa extract, apart from local avarum. It is necessary to find indigenous tanstuffs and the use of other barks has been investigated. The measurement of pH has made possible the substitution of mangrove bark for wattle bark. The indigenous process of tanning used by South Indian tanners has been shown to be open to great improvement, and the cost of tanning has been considerably reduced. Improvements in salt treatment for the curing of skins for export have been made and the trouble due to hardening has been eliminated. The physical chemistry of the tanning processes is being kept well to the fore in all the work of the Institute. A process for depilating by using proteolytic enzymes from the latex of akand leaves had been devised which greatly reduces the time required and improves the quality of the leather in comparison with the lime process which involves a further process of bating.

The tanneries are taking advantage of the Institute's model tannery in finishing their products. There is no doubt that this Institute is doing a fine job of work and will have a direct effect on the development of India's leather industry, both in regard to its cottage and large-scale working.

Down in South India, at Karaikudi, there is another institute, the Central Electrochemical Research Institute. It is not exactly central! It was not possible for us to pay it a visit, but the Director, Dr. B. B. Dey, came to Madras to discuss its affairs with us. Dr. Alagappa Chettiar, a very philanthropic man, donated land and money for this institute, which is in the vicinity of the Alagappa Chettiar Technical College and Anamalai University. The Institute is a fine place. With suitable arrangements for keeping in touch with the National Chemical and Metallurgical Laboratories and the related industries, it should prove to have influence on many future developments, such as the production of heavy water. Dr. Dey, who is an experienced electro-chemist, gave an account of the problems which were being studied at the Institute among which may be mentioned the production of high-purity electrolytic manganese.

CENTRAL GLASS AND CERAMIC RESEARCH INSTITUTE

We next fly on to Calcutta. We visit hurriedly the Bose Institute, a centre of biophysics, where genetical work is being carried out on the exciting effects of radiations in causing biological changes, then the university laboratories where S. K. Mitra's work on the upper atmosphere

is centred, the Nuclear Research Laboratory, of which Professor Saha was in charge, and the Institute of Statistical Research in which Mahalanobis's well-known work is centred. But it was the Central Glass and Ceramic Research Institute we had come to inspect in the Calcutta district. Of the smaller laboratories this was one which Bhatnagar considered a particularly happy design, and we could well agree. It is a beautifully modern laboratory in L form, comprising library, museum and offices. There is also a technological block for processing raw materials, for furnaces and workshops.

Professor W. E. S. Turner, FRS, the well-known expert in glass technology from Sheffield, had spent some weeks at the Institute just before our visit and had written a glowing tribute to the work of the Institute and stated that "the Institute will not only be important in the present needs of the glass industry but would also lead to the establishment of new industries and stimulate a scientific approach in the different branches of the industry with which the Institute is concerned."

"Do it now, I am not interested in excuses for delays, get on with it," is a message by the Prime Minister exhibited in the hall of this Institute. It seems to have inspired the Institute to "get on," for a great amount of work has been accomplished in the short time since it had been opened. Like the Leather Institute it seemed well integrated with the industries it serves. This is largely due to its energetic Director, Dr. Atma Ram, and his able staff.

Glass sands are available throughout India; many of the poorer grades can be improved by the washing, heat treatment and magnetic separation processes which have been developed in the Institute. Work has also been done on clay, felspar and talc resources in collaboration with the Geological Survey, the Bureau of Mines and State Geology Departments. A satisfactory vitreous enamel containing titanium had been evolved which avoids the use of borax. The importation of borax for enamelware can now be avoided. Dr. Atma Ram and his staff were very active in giving assistance to the glass and ceramic industries and legislation should be such that the industries would be encouraged to develop more quickly processes and products which the Institute had shown to be of national advantage.

NATIONAL METALLURGICAL LABORATORY

The firm of Tata has for long operated one of the largest steel works in the Commonwealth at Jamshedpur, situated about half way between the great centres of coal and of iron ore in Bihar. Alongside these great works is the next great research centre—the National Metallurgical

Laboratory. This is the third largest of the Council's new laboratories.

The total iron and steel production of India is of the order of one million tons, of which nearly half is produced at Jamshedpur. The total requirement of India for steel, as stated in the plan, amounted to about three million tons, but recent news indicates that further large plants are to be erected with a total output of six million tons. This is an indication that India's expansion is going forward rapidly. The assistance that can be given by a research centre for metallurgical research is obvious if the industry is to expand.

The Institute has a large main building and a technological block for large-scale operations and pilot plant work. The laboratory is under the direction of Mr. E. H. Bucknall, one time a member of the staff of our NPL and distinguished for his work in ferrous and non-ferrous metallurgy.

Interesting studies on nodularization in cast irons have been made and are continuing. An alloy of copper and magnesium introduced into cast iron causes graphite to be formed in nodules and, on annealing, the cast iron has high ductility. The beneficiation of manganese ores has been investigated and has led to important developments.

CENTRAL FUEL RESEARCH INSTITUTE

Next we hurry on to the Central Fuel Research Institute at Jealgor near Dhanbad in Bihar. A fuel research institute is essential to any country which produces fuels. The Fuel Research Institute has been under the able direction of Dr. J. W. Whitaker, who has been a very successful director. Dr. Whitaker is becoming the Director of the new Mining Research Laboratory which will be erected in the neighbourhood and the post of Executive Director is now filled by this able deputy, Dr. A. Lahiri.

The Institute consists of a main block in which there is a large enough assembly room and a museum. Besides the main block, there is another building behind the main building for coal and coke testing work, and other physical and chemical research. Two limbs of the administrative block are under construction and these, when completed, will provide the much needed floor space for special research laboratories.

The technological block is situated a little way off (200 yards) from the main block. Sufficient area has been set apart for pilot plants relating to steam raising, carbonization, coal preparation, pulverized fuel, and so on.

The annual coal production of India is about 35 million tons. It is mainly required for Indian railways (10 million tons) and for provision

of coke for the metallurgical industries (4½ million tons); only about one million tons are exported. The output is thus quite large and the need for coking coals will become greater as industry expands.

The Director co-ordinates, at the central laboratory, the work of the five Coal Survey Stations situated in different coal fields, and also the work of the Hyderabad Coal Survey. The coals of India are of particular interest and importance for the geological and petrographical study of the origin of coals so that the work of these survey laboratories is not only of economic importance to India, but to coal science generally. The Assam coals, which are high in sulphur, are young and may throw further light on oil and coal formation, while the Jharia coals are probably redeposited drift coals which accounts for the mineral matter being so closely associated with the coal substance. The ash content of these coals is high. Coals from different parts of the world are different in structure and behaviour. So special problems arise as to their utilization in the different countries in which they occur. Coal washing, breaking and carbonization offer different problems in different districts. The Institute has contributed to new methods of analysis of coals, particularly for nitrogen and phosphorus, and thereby to the international standardization of methods.

Altogether the Fuel Research Institute was fulfilling admirably the purpose for which the CSIR set up national laboratories and institutes, and its influence in industry was becoming more and more appreciated.

Near Dhanbad is the big fertilizer plant manufacturing 750 tons of ammonium sulphate daily from gypsum, which is brought by rail from Rajputan. It has been decided, so I understand, that other plants are to be erected to increase the supply four-fold as soon as possible.

CENTRAL DRUG RESEARCH INSTITUTE

A further journey brings us to the historic and beautiful city of Lucknow. Here the Central Drug Research Institute is suitably established close to the Medical Faculty of the University and the Gandhi Memorial Hospital. It is situated in the Chattar Manzil Palace, which has been very cleverly adapted to be in keeping with a modern laboratory without destroying the main architectural features. A modern animal house in good keeping with the architecture of the palace has recently been added in a suitable position on the other side of the fine gardens. This was an essential addition.

The work of the Institute had the advantage of being started under the direction of the late Sir Edward Mellanby, FRS, for many years head of the Medical Research Council of Great Britain. Sir Edward only undertook the direction for a brief period and Lady Mellanby shared in the

task. Subsequently, Dr. B. Mukerji has been in charge of the Institute. Dr. Mukerji is an authority on the active principles of plant products, and is developing the work of the Institute so that the main object may be achieved: the systematic survey of the therapeutic value of the medicinal plant resources of India. A great variety of plant and other products have been used in the past. Some are of definite therapeutic value; some are of very doubtful importance. Some interesting results have been obtained on extracts from *Rauwolfia* species. This plant yields many different alkaloids, one of which has been found to lower blood pressure. The proper value of these drugs is being determined in curing or preventing disease in comparison with other known drugs. The Institute seemed to us commendably unique in that this work has been undertaken as a national problem. In many countries drug research has been mainly carried on in industrial laboratories. The main work of the Institute necessarily gives rise to many subsidiary investigations involving botany, biochemical and bio-physical studies, organic chemistry, microbiology and parasitology, pharmacology, chemotherapy and experimental medicine.

The direction of a laboratory of this kind which involves knowledge of so many branches of science, and in which priority has to be given to the work which is most worth while, is inevitably difficult. The Director has to keep abreast of the latest work in many sciences which are advancing very rapidly, and members of the staff need to be supplied with means to attend conferences abroad. In such a wide field, concentration on certain problems is no doubt necessary. Work scattered over too wide a field may lack the tremendous detail and cross-checking which is required to establish and follow up the discovery of a new scientific fact.

In all places M. Dupouy and I stressed the need for excellence in one particular field of study; excellence is what matters. When a laboratory gets on the crest of the wave of the advance of science even in any narrow field, its reputation is made, for then the work is necessary for the advance of other work in other laboratories all over the world; workers quickly recognize the need to keep in touch with a place where new knowledge is being born. The successful director knows just how to dispose his forces, how much effort to continue to spend on a not too fruitful line of work. Sometimes, however, sheer doggedness in research is suddenly and unexpectedly rewarded.

Most big new developments have come round unexpected corners. Paul Valery wrote that "the human mind is absurd in what it seeks, but great in what it finds." The President of the Council of Administration of the firm of du Pont de Nemours, U.S.A., stated in his survey 1952, "we spend yearly 2.8 per cent of our gross income on scientific research, we

take out one patent daily and we believe that by 1970, sixty per cent of our gross income will come from products which are at present totally unknown or on which research has hardly begun to-day."

NATIONAL BOTANIC GARDENS

We shall complete our tour on the twelve new Council laboratories by a visit to the National Botanic Garden. The towers and minarets of Lucknow are the score to which the colour of the flowers which adorn the gardens supply the music.

In March, 1953, the Governing Body of the Council of Scientific and Industrial Research approved the scheme for taking over the Sikander Bagh Gardens from the Government of Uttar Pradesh. This is an old botanical garden, established originally by the East India Company, but its merit as a botanical garden had dwindled in course of time. Nevertheless, it can be brought into a good state with little difficulty. On 1st May, 1953, the garden became the National Botanical Garden. Mr. K. N. Kaul, who has spent a number of years on botanical research and has the experience of having worked in the botanical gardens at Kew was appointed Director.

The garden will contain a living collection of medicinal plants, of which over 500 species are being grown, along with a herbarium; these will be an asset in the development of drug research at the Central Drug Research Institute, which is near by. The garden is being reshaped. Greenhouses and an artificial lake are under construction. Fruit groves are being improved and different graft varieties of mango, citrus and other fruits are being raised. The garden will also provide opportunities for improvement of horticultural and medicinal plants in order to increase the yield of active principles and essential oils. It is an interesting addition to the scientific institutions under the CSIR, as it provides wide scope for valuable research in the plant world. It should also become a source of delight to the citizens of Lucknow and its visitors. Bhatnagar's vision of the future of these gardens and their usefulness in the hands of the CSIR to India will perhaps someday come to be as true as that of Sir Joseph Banks when he helped to establish the Royal Gardens at Kew.

We are back in Delhi. In taking stock I think you will agree that the creating of this chain of laboratories in so short a time, and the organization it has involved, is a fine achievement. It has provided the young Indian scientist with the means to show his mettle; and the best memorial to India's great public servant, the late Sir Shanti Bhatnagar, is that good work shall be done in these grand institutes, and that they should be well maintained.

I have faith in India's young scientists and technologists; that with initiative and integrity, patience and persistence, they will be well able to fulfil their trust. One of the delights of my visit last year was that in many centres I came across keen young men, some of whom had been students in our laboratory at the Imperial College.

The new Central Office of the CSIR to which we now return, is also a fine new building. The Prime Minister, who is President of the Governing Body of the Council, a body of 21 members, invariably attends the meetings. The Council is an autonomous body administering the Industrial Research Fund and the President is vested with wide powers in the matter of the finance within the sanctioned budget allowance. The Council is attached to the Ministry of Natural Resources and Scientific Research for purposes of administration; it is advised by two bodies, the Board of Scientific and Industrial Research and the Board of Engineering Research. The Research Committees, under the Boards, are thirty in number and cover a wide range of subjects. In 1952-53 110 schemes of research were sponsored in 57 different centres with grants amounting to a total of Rs. eight lakhs. (See diagram).

There are arrangements—such as a liaison officer and a co-ordinating committee of directors of laboratories—so that the work of the Council is well knit together and with the programmes of other laboratories, with industry's needs and with research schemes sponsored by the Council through universities and other bodies. Some of our recommendations were directed towards strengthening this co-ordination, particularly with other research activities (Agricultural and Medical), and at the same time decentralizing the administration of the laboratories as far as possible, and giving more responsibility to the individual boards and directors of the laboratories. India is a big place and it is not so easy as in England to gather people together for frequent consultation.

A journal, *The Journal of Scientific and Industrial Research*, is published by the Council, and also a *News Bulletin*. The compilation of a dictionary of Indian raw materials and industrial products—an encyclopaedia of the wealth of India—was one of the projects about which Sir Shanti Bhatnagar was very keen. There was once a *Dictionary of Economic Products*, compiled by George Watt; this new encyclopædia is an effort to fully implement Watt's ideals. So far the work for eight volumes out of a probable ten has been completed and favourably reviewed.

The Information Service (Insdoc) which has been organized under the Council, and centred in the library of the National Physical Laboratory at Delhi, is an example of putting into practice the findings of the International conferences on documentation which have been held in recent years; there was the one organized by the Royal Society, about which I

spoke when I last lectured here, and also there have been various Unesco conferences on the subject. The Information Centre includes a technical and scientific library, an information service, a document procurement service and a translation service, along with abstracting, classifying and photographic reproduction services. These should render very much more efficient the work of the Council in providing information in reply to inquiries from outside or inside the organization. In these days of tremendous activity in scientific research, these information and intelligence centres are becoming of great importance. This is perhaps particularly so in a country like India, which needs to keep in close touch with scientific work in Europe and America. They also help to get the results of research quickly implemented.

Most industrial concerns in India are too small as yet to maintain research departments of their own, nevertheless some industries, like the textile industry, are extensive. The Council has been interested in educating industry to realize the advantages which can accrue through the formation of co-operative research associations. Three have been formed in the textile industries—the Ahmedabad Textile Industry's Research Association, the Silk and Art Silk Mills Research Association (Bombay) and the South India Textile Industry's Research Association (Coimbatore).

As industry develops, the number of industrial laboratories, like the Shri Ram Institute at Delhi, should increase and there may be need for reorientation of the relationship of the Government laboratories to industry, but I believe that the fine Government laboratories, if kept in close touch with industry and made use of by industry, will provide the main requirement for many years; though other laboratories may have to be added to the list.

There are already some which I have not mentioned, the Central Salt Research Institute under Dr. Mata Prasad's direction which has been opened at Bhavnagar, the Electronics Research Laboratory which is being erected at Pilani, and the Central Mechanical Engineering Research Laboratory for which plans had been made. The latter is particularly related to the development of machinery and tools to aid the development of cottage industries.

It is quite likely that the Government may decide to develop the biological sciences further. Although there are organizations relating to the surveys for zoology (1911), for botany (1912), and for geology (1840), there is need to encourage progress in the biological sciences, for India is rich in material for study. In our report we put in a plea for special attention to astronomy and meteorology, and to physiology, and to the development of the engineering sciences.

ENGINEERING RESEARCH

A Board of Engineering Research was established in 1950 as an Advisory Body to the Council parallel to the Board of Scientific and Industrial Research. The Board set up five committees:

Hydraulic Engineering; Electrical and Power Engineering; Mechanical Engineering; Aeronautical Engineering, Civil Engineering.

Research in engineering subjects had not made much headway in India, although various engineering colleges had long been training engineers. Engineers of high standing had been provided for the many large engineering (civil, mechanical, electrical and telecommunication) undertakings, irrigation and power schemes, and more recently developments in the production of machine tools, electronic equipment, engines and even aircraft.

The Board was established to initiate and guide research in various branches of engineering and to extend financial aid for such purpose. With a view to stimulate research activities, the Board invites proposals from individuals and research organizations, such as those under the Central Board of Irrigation, the Central Water and Power Commission, the Railway Board, the Central Electricity Board, the new Indian Institute of Technology (Kharagpur), the Indian Institute of Science (Bangalore), the Engineering College at Sidpur and Jadavpur, and the Engineering University at Roorkee. Few of the Colleges teaching engineering have facilities for research, but the Reviewing Committee was of the opinion that the Higher Technological and post-graduate research institutes, for instance the Indian Institute of Science, would be highly suitable places in which to foster engineering research. Research work in power and irrigation engineering is mainly carried out under the Central Board of Irrigation and Central Water and Power Commission.

There are difficulties in attracting young men to spend years at research to the detriment of their engineering career so far as salary and other opportunities are concerned. The same happens, however, in other more industrially advanced countries and many of the brighter young men are attracted to remain in the institutes where engineering research is carried out, because of their interest in working at problems which bring them right to the forefront of engineering progress. This means that when they go into industry (having, of course, previously had some engineering workshop and other experience in industry) they are specially qualified to solve the problems which arise and often get quick promotion. It is necessary, however, that the industrial firms should be sufficiently well disposed to research and to adopting new methods to take advantage of the value of such men and give them good prospects.

The Reviewing Committee felt that there is much scope for mechanical and electrical and telecommunications engineering research to aid in the development of the industries of India, and that it should not be difficult to encourage such work, for almost any problem arising in industry can be studied scientifically and can provide an interesting subject for research if the problem is well conceived at the outset. The facilities for carrying out research in the various CSIR laboratories and institutes and in the Bangalore Institute, and other places, are good. The difficulty, however, may be to find the investigators with initiative, zeal and the power to carry things through who are willing to take risks about their careers.

Nothing has been said here about scientific research in relation to the Ministry of Health—medical research—nor about agricultural research, both immensely important for India. I felt that there should be closer integration of these aspects of research with the Council's work. I have seen something of the medical research which is going on in the Haffkine Institute in Bombay, in Dr. Kanulkar's laboratory at the Tata Cancer Research Institute, in the Nutrition Laboratory at Coonoor, the Malaria Control centre in Delhi, and I know well how keen the Minister of Health (Raj Kumari Amrit Kaur) is on all that they do. But I have no special knowledge of these branches of science, and you must forgive the omission of a large section of the Indian research effort. Much the same applies to the agricultural research work. I enjoyed seeing the great Forestry Institute at Dehra Dun which is famous throughout the world and has been a great boon to India. The trees of India are tremendously important, sentinels against denudation, as well as a most valuable asset.

I have said nothing too about the scientific work of the universities, or the technological colleges, like the College in Bombay where research has thrived for many years, nor about the scientific societies—the Royal Asiatic Society of Bengal founded by Sir William Jones, FRS, in 1784, the National Institute of Sciences, the Indian Science Congress, and other societies. India is rich in scientific activities. About the 29 universities there is, of course, a great amount to be said, and there are many problems. Bhatnagar had become Chairman of the Central Government's University Grants Committee which had not long been in existence. His guidance will be missed. I will end with the last paragraph of our report:

We can pay homage to the work which has been done in such a short time, and to the conception of the plan under which it has been accomplished, viz. through the establishment of the C.S.I.R. and the chain of national laboratories. Every country has to adapt itself in its own way to keep abreast of the advance of knowledge and to apply it for the welfare and the betterment of the economic and social conditions of its inhabitants. India, realizing that the future of a great nation lies before it and not behind it, has gone forward. No praise is too high for the executive ability with which Dr. Bhatnagar has given shape to the Prime Minister's determination to bring science well to the fore in India's plan for the future.

India opportunities are tremendous and it is not perhaps quite realized how quickly things are moving there. India has remained a member of the Commonwealth. The destiny of our western workshop here is still closely linked with the great country with which we have been friends for hundreds of years and which perhaps of all countries at the present time holds the keys of man's destiny. The civilization of the future is perhaps not along the extreme technology of the west nor in the direction of despotic communism, but in the hands of those whose ancient traditions and spiritual insight can perhaps give a fresh turn to the wheel which shapes man's future.

A vote of thanks to the lecturer was proposed by the Chairman.

“Rule of Law”

SIR PATRICK SPENS, KBE, QC, MP, the new President of the East India Association, was guest of honour at a party for Indian students given by the Association at The Indian Students' Hostel, Fitzroy Square, on Friday, 1st April.

Sir John Woodhead, Chairman of Council, presided and after tea Sir Patrick Spens addressed the students on the newly published pamphlet “Rule of Law.” The study was published by a committee consisting in the main of practising barristers, including Conservative members of Parliament under the chairmanship of Sir Patrick Spens. Sir Patrick explained that the study did not carry the weight of official policy, but was a personal contribution put forward for discussion and judgment.

In all progressive countries with great social development plans a vast number of rules and regulations were issued at Departmental level to ensure the working of the schemes, and very often the individual felt that he was not getting a fair deal, as in the Crichton Down case widely reported in the press. Also, there was no Tribunal or Appeal Court to which the citizen could take the decision of a Minister if he felt that he had not received justice. “What brought us together,” the authors of the pamphlet say, “was the realization, forced on us in our workaday pursuit of justice, that the present system of administrative law, involving a profusion of decisions taken in the exercise of an absolute discretion, frequently results in harshness and inequity to private citizens.” The Committee, Sir Patrick Spens said, had studied how other countries, such as France and the United States, were dealing with these problems.

Among the proposals made by the Committee was the setting up of a new Division of the High Court of Justice, to be called the Administrative Division, which would hear appeals on points of law; but it would also be able, where necessary, to provide suitable machinery for the ascertainment of disputed facts.

The Committee also recommended improvements in the staffing and procedure of administrative tribunals. Appointments to tribunals should be made by the Lord Chancellor wherever the Ministry itself was likely to be a frequent party before the tribunal, and that where the functions of the tribunal were pronouncedly judicial, as with rent tribunals, the chairman should have legal experience.

Inspectors who hear public inquiries should be differentiated and specialized within their department, and their reports should be published.

The citizen should have the right to an oral hearing, normally in public, to legal representation, and to cross-examine witnesses.

These reforms were not considered sufficient in themselves; tribunals might still make mistakes, particularly in law, and a vast mass of administrative decisions were made without a hearing by any tribunal. The Committee therefore proposed a new system of review. They recommended that administrative decisions should be supported by a statement of the facts and reasons on which they were based, automatically in the case of tribunal decisions; otherwise only if called for by some person affected.

Sir Patrick emphasized that it was the system and not the officials with which the committee found fault. "It is from Westminster rather than Whitehall that redress must be sought." They shared the view that the best permanent solution would be a reduction in the quantity of government to which the individual was subjected. "But in any case we are convinced," the Committee says, "that reforms designed to ensure that discretionary power is not exercised capriciously or in error—that within human limitations justice is done and seen to be done—are not only necessary to preserve the civil liberties of our countrymen, but are also in the very real interest of the Civil Service itself in its task of administration."

India was in the middle of important programmes for social development, and was having to face some of the same problems that had arisen in this country. The Cabinet at Delhi had found it necessary to amend certain clauses of the Constitution. He hoped that by the publication of the study, "Rule of Law," the whole vexed question would be brought before the Governments in the countries where these problems existed, and the ball that had been set rolling would not be allowed to come to rest until something had been done; some solution arrived at to give all citizens a fair hearing and this sore in the body public rooted out.

The Objects and Policy of the East India Association

(INDIA, PAKISTAN, AND BURMA)

IN 1866, eight years after the assumption of the government of India by the Crown, the East India Association was formed with the object of "the promotion of the public interest and welfare of the inhabitants of India generally." This object was steadfastly pursued during the ensuing eighty-one years. The Independence of India and Pakistan attained in 1947, while modifying the original conception, has increased the need for strengthening the bonds of friendship and the importance of mutual understanding between the people of Britain and the inhabitants of the countries formerly comprising the India Empire—namely, India, Pakistan, the States, and Burma. The Association therefore is continuing its work, with the assistance of all those who are interested in the welfare and progress of these countries, by the methods which have proved so helpful in the past, namely:

1. By lectures on current questions affecting those countries and publication of the same.
2. By providing opportunities for the free discussion of important questions affecting India, Pakistan, the States, and Burma.
3. By promoting friendly contact between the peoples of these countries and of Britain through the medium of social and other gatherings.
4. Generally by the promulgation of reliable information regarding the countries named.

The Association is essentially non-official in character and has no connexion with any political party. It seeks to provide an open platform for the consideration of current problems relating to India, Pakistan, the States, and Burma. It welcomes as members all those who are interested in their welfare and progress.

Papers are read and discussed throughout the year, except in the months of August and September. Members are entitled to invite friends to these meetings.

Finance and Banking in India

THE DISTINGUISHING feature of the Indian economy during 1953-54 was its overall stability. This represented to a certain extent the culmination of the disinflationary process initiated towards the close of 1951. Economic policy during the year further strengthened the forces making for stability and flexibility of the system.

The progress achieved during 1953-54 was substantial. From a position of uncertainty at the beginning, the situation had, by the latter half of the year, changed into one of increasing confidence in the stability of the economy; and business expectations tended by and large, to be optimistic. This change in the economic outlook was brought about mainly by improvements in domestic output and stimulation of demand through adjustments in economic policy and the revival in international markets.

PROGRESS OF PRODUCTION

As the year progressed, it became apparent that the output of several agricultural and industrial products would be substantially larger than in the past. The general index of industrial production which stood at 133.2 in June 1953 rose to a record level of 144.7 in December 1953. In 1953, production in the cotton textile and salt industries surpassed the targets laid down in the Five-Year Plan, and cement output attained a new high of 3.78 million tons. Output in several engineering industries increased, and some new industries were started. Production of steel and coal, which had declined in 1953, recovered in the first quarter of 1954. And though the general index of industrial production fell subsequent to December 1953, it maintained an average level of 137.6 in the period January-March 1954, compared with an average of 132.7 in the corresponding quarter of 1953.

Increases in food production were equally impressive. The production of cereals in 1952-53 had reached 47.6 million tons or an increase of 5 million tons over that in 1951-52. And in 1953-54, in view of the favourable weather conditions which obtained during the year, it is expected that the output would be substantially larger than in 1952-53. Raw cotton production is estimated at 3.94 million bales, or about 800,000 bales more than in the previous year. Outputs of sugarcane and oilseeds are also expected to exceed those in 1952-53. Jute and tea, however, registered declines in 1953-54.

These increases in production facilitated an enlargement of government expenditure on development and adoption of measures to stimulate private trade and industry. Partly to allay the prevalent fears of unemployment and partly to make up the slack in planned development outlay in the first two years of the Five-Year Plan, the rate of development expenditure had been stepped up in the budgets for 1953-54. Further, in October 1953 the projected five-year outlay was raised by Rs. 1,750 million. As the year progressed, most of the controls on prices and distribution of commodities within the country were relaxed or removed and the scope for private trade was widened.

PRICES AND MONEY SUPPLY

The price situation during 1953-54 was on the whole stable, although the price indices were throughout the year a shade higher than in the preceding year. The substantial increase in agricultural and industrial output undoubtedly contributed to the comparative price stability though its impact on prices was comparatively neutralized by the sharp decline in the volume of imports, particularly of foodgrains and some industrial raw materials. During the year, there were a series of short-term movements and indices of groups as well as individual commodities showed divergent trends indicating adjustments in relative prices. Over the year, the general index of wholesale prices (base year end August 1939=100) recorded a net rise of 2.3 per cent from 385 to 394.

In the monetary sphere it appeared as if these inflationary trends of the previous two years had been worked off. During the year, money supply with the public (including deposits of State Governments with the Reserve Bank which showed rather unusually a sharp rise of Rs. 430 million) recorded a rise of Rs. 490 million, in contrast to the declines of Rs. 410 million and Rs. 1,730 million in 1952-53 and 1951-52 respectively. During the three-year period of the Plan (1951-54), money supply with the public recorded a sizeable contraction. The rise in money supply in the year was in consonance with the increasing needs of the developing economy and resulted mainly from a substantial surplus in balance of payments and the budgetary deficit, the magnitude of the latter being, however, smaller than the original estimate. The supply of money to the private sector was also augmented by assistance from the Reserve Bank, which was on a larger scale than in the previous year. Schedule bank credit also showed a larger seasonal extension, but this was in part due to the substantial restoration of trading in foodgrains to private channels, and there was no major net increase in bank credit for the year as a whole.

The capital market manifested a substantial measure of stability and confidence. The market was able to absorb considerable amounts of Government securities without perceptible effect on prices. The industrial share market also ruled buoyant during the greater part of the year, reflecting the general confidence regarding business prospects. The bullion market, too, remained relatively firm owing mainly to the improved demand following better harvest during the year.

BUDGET OF THE CENTRAL GOVERNMENT

The 1954-55 budget of the Government of India is a developmental budget in a more significant sense than the earlier ones presented during the Plan period. It envisages a substantial increase in developmental expenditure on the Centre's own account, both revenue and capital, and also through larger assistance to States in the shape of loans and grants.

Following the substantial stepping up of developmental expenditure an overall deficit of Rs. 2,500 million is envisaged in this budget, after taking credit for new loans in the domestic market and for foreign loans and grants likely to accrue during the year.

The estimated revenue in the budget for 1954-55 is placed at Rs. 4,410.3 million and the expenditure at Rs. 4,670.9 million leaving a deficit of Rs. 260.6 million. Taking the overall budgetary position of the Government of India since 1949-50, it appears that the first year of the Plan period, i.e., 1951-52, closed with a small overall surplus of Rs. 9.1 million; for the second and third years, i.e., 1952-53 and 1953-54 (revised), overall deficits have been placed at Rs. 644.9 million and Rs. 1,282.9 million respectively. Thus for the three years 1951-54, the total budgetary deficit amounted to Rs. 1,918.7 million. The deficit for 1954-55 of Rs. 2,500 million is expected to be covered through the issue of Treasury Bills. It is felt that in the conditions as they now are and are likely to be in the near future, no undue risk is being taken in launching upon deficit financing of the magnitude of the whole of the deficit of Rs. 2,500 million.

BUDGETS OF THE STATE GOVERNMENTS

The overall budgetary position of both Part A and Part B States has been a deficit in the three-year period 1951-54; in 1954-55, the deficit is estimated to be even larger than in the previous years. The magnitude of the deficits, as given in the budget documents, relates only to the decline in the cash balance of the State Governments. In this sense the total deficit of the Part A and Part B States put together amount to Rs. 330.6 million in the period 1951-54, and is estimated at Rs. 358.3 million in

1954-55. It should, however, be noted that the budgets, as presented by the State Governments, include net receipts, the sale proceeds of securities held in the various reserve funds and cash balance invested again. Thus during the three-year period 1951-54, Part A and Part B State Governments drew from the above sources an aggregate sum of Rs. 617.2 million, and in 1954-55 they estimated to obtain Rs. 185.4 million. For a proper appreciation of the ways and means position of the State Governments, one would have to include the depletion of reserves in the computation of overall deficit. With the exhaustion of the reserves, the States will have to match their expenditure by current receipts, including loans, grants from the Central Government. However, the deficit thus arrived at is not necessarily the same as the inflationary gap, since a part of the liquidation of securities may represent sales to the public or the Central Government. In the latter case the burden of financing is shifted to the Central Government, whose deficit is thereby increased or a surplus, if any, diminished.

In absolute terms, both the total receipts and disbursements of Part A and Part B States on the combined revenue and capital account have shown a substantial rise during the period 1951-55, the rate of increase in expenditure being greater.

On the revenue side, it is significant that nearly two-thirds of the increase in the receipts of the States during the four-year period is accounted for by larger loans and grants from the Central Government, mainly to finance development expenditure. During the same period the additional resources raised by the States through taxes and loans from the public have been relatively small. Non-tax revenue receipts (i.e., excluding grants from the Centre, etc.) of the State Governments recorded a rise which is spread over all the important items with the exception of forests. Finally, the net receipts of the States from long-term borrowing rose from Rs. 108.0 million in 1951-52 to Rs. 112.4 million in 1952-53 and to Rs. 361.4 million in 1953-54, or a total of Rs. 581.8 million.

On the expenditure side, more than three-fourths of the rise is accounted for by outlay on development items; they show an increase from Rs. 3,228.0 million in 1951-52 to Rs. 4,891.5 million in the budgets for 1954-55. Expenditure on civil administration shows no significant change; direct demands on revenue, however, have recorded a rise from Rs. 355.7 million to Rs. 546.5 million. Among individual items of outlay on development (revenue as well as capital), multi-purpose river valley and irrigation schemes show the largest net percentage increase followed by electricity schemes. In absolute terms also the former was the largest single item of development expenditure in 1951-52, and will be so according to the budget estimates for 1954-55.

Due to the lack of comparative data for the entire period, the budgetary trends in Part c States have to be confined to Bhopal, Coorg, Delhi, Himachal Pradesh and Vindhya Pradesh. The overall budgetary position of these five Part c States on revenue account shows deficits of Rs. 3.34 million on 1953-54 (revised), and of Rs. 7.63 million for 1954-55 (budget). The deficit is largely due to an increase in development expenditure (excluding Civil Works), which normally accounts for a considerable part of total expenditure in all six States.

The available data for Part c States reveal some characteristic features. Since most of these States are small in area and population and are still in a formative stage of development, non-tax revenue (mainly grants in aid from the Centre) is relatively more important than tax revenue. Large grants in aid are given by the Centre to enable these States to balance their revenue budgets and also to maintain an adequate working balance in their consolidated funds.

BALANCE OF PAYMENTS

The Balance of Payments position showed a favourable turn during 1953, there being a surplus of Rs. 590 million on current account as against a position of near balance in 1952. This was, however, achieved at a sharply reduced volume of imports, both private and Government. The fall in imports was accounted for mainly by reduction in food imports, consequent on the improvement in domestic output. On the exports side, the major factor was the decline in export earnings from jute manufactures. Added to this there was a further, though small, deterioration in the terms of trade, region-wise. There was a spectacular improvement with the dollar area—a deficit of Rs. 1,110 million in 1952 giving place to a surplus of Rs. 310 million.

According to preliminary estimates, India's external transactions in the first quarter of 1954 recorded a sharp decline in the surplus on current account from Rs. 476 million in the last quarter of 1953 to Rs. 191 million. This decline was due to a sharp fall in exports, principally of jute manufactures and tea, coupled with a moderate rise in imports, the corresponding net investment on capital account was Rs. 325 million. The terms of trade improved over the quarter by 5 per cent. The reduction in the surplus on current account resulted from the fall in the surplus on private account compared with the previous quarter, the surplus in the private sector including merchandise as well as invisible transactions, was almost half of Rs. 302 million. In the Government sector on the other hand, there was a further reduction in the size of the deficit from Rs. 141 million to Rs. 111 million.

Region-wise with the exception of the OEEC countries, with which the position improved slightly, there was a marked decline in the surplus with the sterling area (excluding Pakistan), the dollar area and the rest of the non-sterling area. The payments position with Pakistan more or less remained unchanged.

BANKING

The year 1953, on the whole, has been a quiet year for Indian Banking. Conditions were relatively normal in comparison with 1951 when the level of bank activity was high as a result of the boom consequent to the Korean war, or with 1952, when adjustments in the banking system to the lower bank rate and to the change in the policy of open market operations were taking place. This reflects the successful completion of the readjustments of the banking system to the disinflationary monetary policy adopted towards the end of 1951.

Seasonal movements of expansion and contraction in bank credit during 1953 were more or less balanced, about Rs. 900 million each way, indicating that they stemmed from genuine trade purposes. A more normal relationship between the level of economic activity and that of bank credit seemed to have been attained during the year because, although there was larger output at some higher prices, and business activity as a whole was on a higher level, credit extended by the banking system was generally restrained. There was in fact a moderate contraction of bank credit amounting to Rs. 100 million which compared with a considerable drop of Rs. 660 million in 1952 and a sharp spurt of Rs. 1,180 million in 1951.

There was no strain on the banks during the year in meeting the moderate demand for credit. They had their portfolio of treasury bills to fall back upon to some extent; and some of the exchange banks had, in addition, recourse to short-term borrowing from abroad. These two years were generously supplemented by accommodation from the Reserve Bank partly against Government securities and partly against usance bills, made available under the scheme which was inaugurated two years ago and extended during the year so as to include banks having deposits of Rs. 50 million and over. The total amount advanced to banks from these two sources amounted to Rs. 2,000 million during 1953. The approach by banks for accommodation from the Reserve Bank—either through re-discount of treasury bills or against Government securities or against usance bills—has now become a regular feature and is a welcome development in the context of the responsibilities placed on the banking system in the Five-Year Plan.

Branch-banking continued to show a decline, but it is significant that this occurred entirely in the branches of the non-scheduled banks. The total number of offices of the scheduled banks at the end of 1953 was 2,692, and of non-scheduled banks 1,344, making a total of 4,036. The branches of Indian scheduled banks abroad increased by six during the year. The total deposits of the foreign branches of Indian banks amounted to Rs. 670 million, their liquid resources to Rs. 380 million, and their advances and discounts to Rs. 360 million. Indian scheduled banks on the whole strengthened their reserves during 1953, for their reserves which amounted to 82 per cent of their paid-up capital in 1952 amounted to 84 per cent in 1953. In the case of non-scheduled banks, however, the proportion of reserves to paid-up capital remained virtually unchanged at 45-46 per cent. The deposit liabilities of the scheduled banks increased by Rs. 80 million, which was the net result of an increase in time-deposits of Rs. 120 million and a fall in demand-deposits of Rs. 40 million. This increase is an indication that the post partition downward movement in deposits has been arrested. What is more interesting is the fact that during the year there was an increase of Rs. 170 million in the deposits with the Indian scheduled banks and a fall of Rs. 90 million in those with the exchange banks.

Banks now appear to be working on lower cash ratios, the average for scheduled banks for 1953 being 9.2 per cent as against 10.0 per cent in 1952 and 10.8 per cent in 1951. This would seem to be due in part to the borrowing facilities now available at the Central Bank—the Reserve Bank of India.

Over the year as a whole, scheduled banks investments increased by about Rs. 110 million. As regards earnings and expenses, eighteen of the larger Indian scheduled banks increased their earnings by Rs. 3 million, whereas the expenses went up by Rs. 6 million, the result being a fall in net profits to Rs. 49 million.

CO-OPERATIVE BANKS

The volume of business of the Co-operative Banks is now larger than that of non-scheduled banks, despite the fact that non-scheduled banks are still more numerous. The accommodation granted by the Reserve Bank to Co-operative Banks at the concessional rate of $1\frac{1}{2}$ per cent for financing agricultural operations and marketing of crops amounted to Rs. 130 million in 1953 as against Rs. 100 million in 1952, Rs. 90 million in 1951 and Rs. 50 million in 1950.

As was pointed out by the Reserve Bank of India report on the Indian Banking System, "the role of the banking system in the context of its

responsibilities in the Five-Year Plan has to be related not merely to measures designed to increase its resources but to a more effective use of them. There is reason to believe that the working capital requirements of organized industry are being met at present in fair measure." The Reserve Bank of India has been considering with the help of a committee whose report was recently released, the problem of providing adequate funds to the private sector with special regard to the scope of assistance which banks might render.

Indian Food Campaign

DURING THE WEEK commencing April 1, 1951, when India's Five-Year Plan went into operation, about 122,000,000 people or their agents queued up before ration shops throughout the country to buy foodgrains for their families. Each week, as they stood impatiently in the queues, they asked when this irksome ritual which they had had to perform since May 1943 would stop.

A necessity imposed upon the nation during the second world war, and a device universally recognized for ensuring equitable distribution of supplies, food rationing (and other food controls) had lingered on after the war because of several adverse factors:

The year which immediately preceded the Plan was the "bottom year" since independence in respect of foodgrain output, which had suffered grievously as a result of successive natural calamities and failures of monsoon. Imports had been piling up high, reaching in 1951 an all-time peak in the nation's history. The grip of rationing had tightened on a gradually expanding circle of vexed householders. Foodgrain prices had risen alarmingly. Altogether things appeared rather dismal in the first half of 1951.

WEAPONS OF SUCCESS

As the Plan went into operation, the "battle for food" entered its decisive phase. It was fought on many fronts and with many weapons.

The Grow More Food Campaign was intensified and integrated with the Plan, which gave agriculture dominating importance in national planning.

A new emphasis was placed on minor irrigation projects which promised quick results, and more than 40 per cent of the Plan's outlay on agriculture

was devoted to such works. The country to-day has the world's largest tubewell construction programme in operation.

Crop competitions were organized throughout the country to encourage farmers to increase crop yields on land already under cultivation. Large-scale experiments were made with the Japanese method of paddy cultivation, and as its success was demonstrated its application is being extended.

Vigorous attempts have been made to encourage the extensive application of fertilizers and other manures as well as for the use of improved seeds.

The community centres operating in all parts of the country have made special efforts to help in increasing foodgrain output. The national extension service and land reclamation operations, too, have made their distinctive contributions.

TURN OF THE TIDE

The cumulative effect of the various measures to increase production began to be visible in 1952. In 1952-53 a merciful nature rallied to the support of the people, who, in the far-flung countryside of India, were engaged in a determined bid to overtake food shortage. The tide was beginning to turn.

But even the prospect of an improved harvest was by itself not enough. Minds accustomed to long years of shortage or fear of shortage could not easily be persuaded that the end of scarcity was approaching. The safety that lay in controls was considered an argument for their continuance. It was necessary to create a "psychology of sufficiency"—a slow process, which called for the utmost faith and vigilance. To this end future effort was directed.

In June, 1952, the Government of India took a bold step. Statutory rationing was abolished in Madras, and certain other relaxations in controls were made in the State. This was a calculated risk. It proved a good risk. Things now happened in fairly quick succession.

On March 25, 1953, the Food Minister, the late Mr. Rafi Ahmad Kidwai told the Press at Bombay: "The food problem in this country will soon be a thing of the past."

"PROBLEM HAS ENDED"

From Madras there was no going back. Heartened by its example, the Central Government gradually introduced relaxations and adjustments in food controls elsewhere. Step by little step, encouraged by improving public sentiment, the Government of India widened the scope and area of relaxations. It became one long, continuous progress.

In State after State, the queues before ration shops which had lengthened since 1943 thinned, then finally disappeared. Restrictions and austerity measures went one by one.

After the Five-Year Plan had run approximately half its course, Mr. Kidwai told the nation: "The food problem has ended."

Nature continued to co-operate, and 1953-54 proved a bumper year. Harvests were encouraging. Prices in the open market began gradually falling. The steady return to normalcy had registered the victory which the people and the Government had won in the battle for food.

In September 1953, quantitative restrictions on the issue of wheat both to the consumers and the trade were lifted. In November, 1953, all State Governments were advised to decontrol wheat and coarse grain completely, but to retain the ban on their inter-State movement. As the fall in prices continued despite decontrol, the ban on the movement of coarse grains was lifted in January 1954. Two wheat zones of several States each were subsequently formed, and movements within each were made unrestricted. Finally, on July 10, 1954, came the complete decontrol of rice. The two-year-old process of decontrol was now almost completed.

TARGETS EXCEEDED

In the Five-Year Plan, 1949-50 was taken as the "base" year and a target increase of 7.6 million tons of cereals over this year was fixed, to be attained by 1955-56. Thanks to the concentrated production drive and favourable monsoons, the five-year target has been exceeded by about two million tons in the Plan's third year, 1953-54. This is an improvement of 20 per cent on the base year, as against a total increase of only 14.3 per cent contemplated in the Plan over the whole period of five years.

India produced 66 million tons of foodgrains in the agricultural year 1953-54 which ended in June 1954, exceeding the Five-Year Plan target for 1955-56 by 4.4 million tons. This comprises 56.1 million tons of cereals and 9.9 million tons of pulses.

During the year the country also recorded the highest ever acreage of 261 millions. Target acreage under the Plan was exceeded in the previous agricultural year, and in the year under report another 9 million acres of land was brought under foodgrains. Rice production for the year under review established an all-time record of 27.1 million tons. This is almost equal to the target fixed for the end of the Plan period. Increase has been due, apart from favourable weather, to the adoption of the Japanese method of cultivation in more than 4 million acres.

Wheat output, which is 7·8 million tons, is another record for India and exceeds the calculated target for the year by 0·3 million tons. Production of millets and other minor cereals has been even more spectacular in 1953-54. This even exceeds the target of 17 million tons at the end of 1955-56 by about 4 million tons. In the case of gram, production of 4·5 million tons in 1953-54 is still another record. This large production resulted in drastic reduction in foreign imports. In 1951 India imported 4·7 million tons of foodgrains at the cost of Rs. 2,160 million, but in 1952 they came down to 3·9 million tons valued at Rs. 2,100 million. In 1953 there was a further reduction to 2 million tons valued at just Rs. 860 million. During 1954 total imports for the first eight months were roughly one-fifth of the total quantity imported in the whole of 1953.

The rise in production of foodgrains in 1953-54 is not solely due to increase in acreage. For, as against the increase of 6·4 per cent in area, increase in production works out to be as much as 22·2 per cent. Clearly average yield per acre in 1953-54 was higher than the previous year's.

The Nutrition Advisory Committee laid down 17 ounces of foodgrains per day as balanced diet for every adult. Availability of foodgrains per head at present works out to a little more than the prescribed balanced diet. Balanced diet envisaged at the end of the Five-Year Plan is 15·81 ounces.

During the peak period in December 1947, the rationed population exceeded 144·6 million—representing over 40 per cent of the country's population. Prior to the relaxation of controls, in mid-1952, 108 million people were subject to rationing. Their number stood at 83·4 million at the end of 1953, and dropped to 44 million on April 30, 1954. To-day, rationing is only an unpleasant memory.

PRICES FALL

A year ago, the people's main concern related to the prices of foodgrains. Have these fallen?

Rice, which cost Rs. 36 per maund at Patna in September 1951 could be bought for only Rs. 14 at the same place on July 17, 1954. Similarly, wheat which could not be bought for less than Rs. 23 per maund in February 1953, was available at Hapur on July 17, 1954, at about half that price. Taking all cereals together, the index of prices has shrunk from 495 in October 1950 to 377·3 on July 3, 1954.

High foodgrain prices were one of the main worries of the Union Government when the Five-Year Plan went into operation. To-day, the problem before it is how to prevent a fall in prices so that they do not go below levels which may be uneconomic for the cultivator.

This change in the price situation highlights the all-round transformation that has taken place in the country's food budget—from 1952 to 1954. The nation can look to the future with confidence.

FOOD - FACTS AT A GLANCE

(1) The Five-Year Plan fixed an increase of 7.6 million tons in cereal output by 1955-56. Already, the estimated increase in 1953-54 is 9.5 million tons.

(2) While the Plan envisaged an increase of 14 per cent in five years, the estimated increase in the third year itself is about 20 per cent.

(3) Compared to 1950-51, the lean year which immediately preceded the commencement of the Plan, cereal output in 1953-54 is estimated to have increased by 33 per cent (rice 34 per cent, wheat 12.5 per cent, other cereals 41 per cent).

The Music of Pakistan

THE PEOPLE OF PAKISTAN are great music lovers and the range of their music is wide and varied, the roots going back deep into Arab history.

The art and science of music had been taken to a high degree of perfection by the Arabs during the early Middle Ages. Orchestral music existed in the Muslim East as far back as the 8th Century A.D. and many Muslim rulers were not only patrons of the Muse but active exponents of the musical art. Caliph Omar, of Baghdad, was himself a great composer. Caliph Haroon-el-Rashid of Arabian Nights' fame was an accomplished musician and so was his wife, the Empress Zubeida who conducted a women's orchestra of one hundred violins. Indeed, the very word "Music" is derived from the Arabic "Musiqi."

Like Baghdad, Cordova under the Arabs was another centre of art and music. In A.D. 821 a great Music Academy was established there during the reign of Caliph Hakam and it was an Arab student of this academy who made the famous Stradivarius violin. Other music schools were set up in Seville, Granada, Valencia and Toledo.

Many scholarly treatises on music were written by Arab theorists. Alfarabius's eight works on music were translated into Latin by John De Seville and Gerald de Cremova. This Arab scholar also invented the Kanoon which was the forerunner of the spinet. In fact a number of musical instruments were introduced into Europe during the crusades,

including the lute, the fiddle, the trumpet, the oboe and the guitar. The tambourine also comes from the Arab "Tamboor."

When the Muslims came to the Indo-Pakistan sub-continent to settle at the end of the twelfth century, they brought with them this rich musical heritage. The Pakistani scale of seven notes is based on the Arab scale though the impact of Persian, Arabic, and Turkish culture and language resulted in the new language of Urdu in which many of the songs of the sub-continent are composed.

Some of the great names in the history of classical music in the sub-continent are, Amir Khusro (1295-1326), Tan Sen who lived in the times of Akbar the Great (1556-1573), Mohammad Shah Rangila the "Merry Monarch" of Delhi (1719-1748) and the Kings of Oudh. In modern times the roll of famous musicians in Pakistan contains the names of such as Fyyaz Khan, Abdul Karim Khan, Thakur Nawab Ali, and Roshan Ara Begum. Pakistan's classical music, the most highly-developed system of music in Asia is naturally confined to the comparatively limited circle of the sophisticated, though the lighter style of classical singing such as "dadra," "thumri," "ghazals," and "qawwali" is very popular with the general populace.

Pakistan is exceptionally rich in her folk-culture with a colourful variety of provincial and regional languages, costumes, literature, and music.

The Kashmiri peasants and boatmen have their own haunting melodies while the sturdy and rugged Pathans perform their wild Khattak dances and sing their stirring songs to the accompaniment of the "Sarinda."

In the Punjab, the tempo is softer. Songs and duets, known as "Mahias," "dholas," etc., are sung around the bonfire by men and women on moonlit nights, while the stories of the Punjab's "Romecs" and "Juliets" have been immortalized by her poets in song and ballad.

In Baluchistan the folk music of this mountainous region reflects the proud and hardy spirit of its inhabitants. Their main dances are the "jhummur" and the "banga."

In Sind, the seat of the ancient 5,000-year-old Indus Valley civilization, the folk music is restrained—tinged with a mysticism imbibed from this age-old culture.

Perhaps nowhere in Pakistan is the heritage of music and song so rich and vibrant as in East Pakistan. Here one breathes the very air of melody; and life on the rivers, in the jute and rice fields and in the palm groves echoes to the sounds of music and, when work is done, to the sounds of dancing and gaiety. The people of East Pakistan have always been famous for their genius for composing ballads and ballad music and their ballads and dances like the "Dhali," "Kathi," "Puja," "Reshbe," and "Kakri" are typical of these gay and music-loving people.

Uzbekistan*

THE CONFERENCE OF HISTORIANS

IN FEBRUARY, 1954 a conference of historians was held in Tashkent to discuss problems affecting the study of the history of the peoples of Central Asia and Kazakhstan. Before the conference, on 16th January, a lengthy article in *Pravda Vostoka* enumerated some of the recurrent errors in the interpretation of the history of the peoples of Central Asia. Many historical problems, the article stressed, had not so far been finally elucidated, and individual historians continued to repeat grave ideological errors already condemned at the Tenth Plenary Session of the Uzbek Communist Party and at its Eleventh Conference.

PREVALENT ERRORS

One of these errors is to conduct research in each republic in isolation, and without co-ordination with the work of historians of other Central Asian and Union academic institutions. The history of the Uzbek people, for instance, is closely bound up with that of Central Asia as a whole and with the other Union republics. The paramount duty of Uzbek historians is therefore to make a comprehensive study of all that is common to the peoples of Central Asia and the Union as a whole, that is, the study of the struggle of the toiling masses of Central Asia towards freedom and of the progress of all the peoples of the Soviet Union, including the Uzbeks, in their march towards Communism.

There are also other vital problems which have not yet been fully or correctly studied, such as the proper classification of periods into which the history of the peoples of Central Asia and Kazakhstan should be divided, the study of the birth and development of a "bourgeois" society in Uzbekistan, the study of the "reactionary nature" of pan-Islamism and pan-Turkism (pan-Turanianism), of the feudal patriarchal system that once prevailed among the nomads of Central Asia and Kazakhstan, and last but not least the study of the 1916 rebellion in its true perspective.

The *Pravda Vostoka* article points out that the classification of periods as used in the second volume of the *History of the peoples of Uzbekistan* must be revised because it is, erroneously, based not on the various economic stages of Uzbekistan's development but on arbitrary chronological data such as the reigns of individual rulers. Further, insufficient attention is given to a definition of the specific characteristics of slavery in Central Asia. The absence of reliable written Uzbek records and the

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inadequate study of archaeological remains has so far made the approach to the study of slavery extremely unsatisfactory. The contributors to the first volume of the *History of the Peoples of Uzbekistan*, indeed, hold divergent views on the character of social relations based on slavery.

Generally speaking, many social and economic problems relating to the feudal period in Central Asia are not adequately studied, such as the development of agriculture, of irrigation and of feudal land laws. Again, not all available sources of material have yet been explored; thus while the valleys of Amu-Darya and of the lower reaches of the Zeravshan have yielded archaeological and historical data, many other regions of ancient agriculture such as the Fergana Valley and the present Tashkent and Samarkand oblasts have not yet been properly examined. In addition, historical records in foreign languages have not been thoroughly explored, and nothing has been done to make available important works compiled or written in the Middle Ages; there is no translation into Russian from the Arabic either of Biruni's famous historical treatises or of the work of Avicenna.

THE INTERPRETATION OF "NATIONALIST" MOVEMENTS

The duty of historians, it is said, is to uproot the grave deviations in former interpretations of "nationalist" movements and to reveal the true roots of pan-Islamism, pan-Turkism and *Dzhadidizm*. The feudal monarchial *Dzhetymhan* movement in Fergana, and the Andizhan revolt of 1898 must no longer be defined as progressive national liberation movements, but as the outcome of reactionary tendencies. More penetrating research has to be done on the 1916 rebellion. Although this was in essence a popular liberation movement against the local agents of Tsarism and though in certain areas it assumed anti-feudal trends, it should never be forgotten or ignored that some of its aspects were reactionary. In the Tokmak and Przhevlask areas, in Dzhinsk, Gurgén and in Tedzhen feudal clerical elements came to the fore with the active assistance of "foreign intelligence agents," and separatist tendencies had developed. The duty of historians is to analyse this movement from a Marxist point of view and not to retouch and gloss over its reactionary, feudal, clerical and "nationalist" aspects. Even greater problems confront historians in describing the Soviet period of Uzbekistan.

CENTRAL ASIA AND RUSSIA

The article calls for a proper study of late nineteenth-century developments in Uzbekistan, and in particular of the evolution of

"bourgeois" capitalist tendencies following the annexation of Central Asia by Russia. A tendency still persists to minimize the "progressive" character of this incorporation. In the second volume of the *History of the Uzbek People*, for instance, the "progressive" features of this event have hardly been touched upon, and the impact of the revolutionary forces of pre-revolutionary Russia on the peoples of Central Asia are inadequately dealt with. In short, the study and clarification of the enormous part played by the proletariat of Russia in the liberation of the peoples of Central Asia from "nationalist" and economic oppression have been neglected. A Marxist analysis of the Social, economic and cultural conditions would show that the incorporation helped to form the Uzbek people into a "bourgeois" nation, and would certainly reveal this stage in Uzbek history as a milestone on the way to Socialism.

Another article prior to the conference was written by Radzhapov, Rector of the Tadzhik State University, who reminded readers that the ties of friendship linking the peoples of Central Asia and the great Russian people dated from extreme antiquity. In the fourth century B.C. the ancient state of Khorezm had trade relations with the northern shores of the Black Sea, which later became the abode of Slav tribes. These direct contacts, and contacts through the Tatars, enriched the language of the Slav tribes of the present day Ukraine by a number of Tadzhik and Turkic words such as *biryuza*, *izumrud*, *kavun*, *izyumi*, *bazar*, *arshin*, *karavan*, *sarai*, *chubuk*, *atlass*, *kumach*. In the fourteenth century merchants from Bukhara and Khiva traded at the fair of Nizhni Novgorod. In the sixteenth century, eight envoys with their followers visited Russian domains. In the eighteenth century, every five or six years trade envoys from Bukhara and Khiva visited Moscow, Petersburg, Orenburg and the towns of the Ukraine. In 1851 Marx wrote to Engels that it seemed Russia was to play a progressive part in the areas of the Black and Caspian Seas and in Central Asia. To-day it is axiomatic that the incorporation furthered the most essential interests of the peoples of Central Asia since at the time they were threatened by West European "imperialists" and by the Afghan and Persian rulers. Indeed, they might easily have become a colonial protectorate of England. According to Marx, England in the sixties and seventies had lost its revolutionary impetus while Russia, in spite of Tsarism, had become a revolutionary force and was in the vanguard of the revolutionary movement in Europe.

Radzhapov goes on to point out that after the incorporation of Central Asia, slavery was abolished and an end made to the feudal wars from which the people suffered. The strengthening of economic ties with Russia brought "progressive" developments in the economic and social structure. This did not mean, of course any radical change in the way

of life of the peoples of Central Asia. The basic feudal structure remained unchanged and the colonial period which followed brought much hardship. It was only the October Revolution which brought "final liberation." Radzhapov's ultimate conclusion is that the present ties of friendship between the peoples of Central Asia and the great Russian people are deeply rooted in history.

THE CONFERENCE PROCEEDINGS

There was extensive press coverage of the conference. The names of Tolstov, Sidorov, Dyakonov and other eminent historians were mentioned as participating. Those present included historians from the Azerbaidzhan SSR, the Tatar, Bashkir, and Dagestan ASSR, many local professors and teachers, Communist Party members and representatives of republican organizations. Among papers read was a report by Dr. Potapov on the patriarchal feudal status of the nomads of Central Asia and Kazakhstan. On 3rd February Gafurov submitted a paper on the reactionary character of pan-Islamism and pan-Turkism. On 2nd February a paper on the formation of the Uzbek "bourgeois" nation was read by Vakhobov and Nusupbekov. The same evening there was a paper on the 1916 rebellion. The final thesis for discussion was "On the correct definition of the historical periods in the life of the peoples of Central Asia and Kazakhstan."

THE PATRIARCHAL FEUDAL STATUS OF NOMADS

The conference refuted the theory that nomadic peoples, by the very nature of their economic relations, could not rise above a primitive communal structure of society. It was stressed that the economic foundations of a feudal society were based on landed property, that the nomads had passed through the same social and economic stages as other feudal societies and that ownership of irrigation waters had had a great deal to do with the stratification of feudal relations. The idea (maintained by some of those attending the conference) that cattle and not land were the basis of the Central Asian feudal structure was strongly repudiated as not being in line with historical facts.

FORMATION OF THE UZBEK "BOURGEOIS" NATION

It was emphasized that the incorporation of Central Asia into Russia had a tremendous "progressive" influence. Under its impact "bourgeoisization" had been accelerated both in Uzbekistan and Kazakhstan.

At the same time it had brought about a growth of class consciousness and had led the Uzbeks to a rapprochement with the most revolutionary proletariat of those days, and also with Russian as distinct from Tsarist culture. There was some difference of opinion at the conference over the extent to which the formation of "bourgeois" nations had been completed by the time of the Revolution. The final conclusion was that both Uzbekistan and Kazakhstan in the short period after their annexation could not have passed through a complete capitalist cycle in their economic and social development and that up to 1917 the final capitalist stage had not been reached by any of the peoples of Central Asia.

PAN-ISLAMISM AND PAN-TURKISM

Gafurov's report on the reactionary character of pan-Islamism and pan-Turkism met with little or no criticism. Most of those present at the conference agreed that this "reactionary racial ideology" was against the interests of the workers, and was launched and supported by international, especially American, "imperialists." It must not be forgotten he said, that "imperialists" of all shades were trying their utmost to find in Central Asia elements through which they could carry out their aggressive plans. Rabid "nationalism" in Central Asia and Kazakhstan was bound up with pan-Islamism, pan-Turkism and pan-Iranianism. More stringent efforts would have to be made to unmask and eradicate all manifestations of this reactionary ideology. Serious errors could still be detected in historians' appraisals of the *Dzhadid* and *Alash* movements.

THE 1916 REBELLION

Gross errors and misrepresentations of historical facts had been allowed to mar the assessment of the 1916 rebellion. There were historians who considered the movement as totally reactionary. Others held it to be anti-colonial and ignored the fact that in certain regions it assumed a definitely reactionary character. Following a discussion the conference agreed that in most districts this movement had been of a revolutionary nature because it was directed against Tsarism and against the feudal *bai* rulers. Only in a few districts had it become a totally reactionary anti-Russian movement.

'BOURGEOIS' FALSIFICATION OF HISTORY

It was demonstrated at the conference that Soviet historical science had unmasked such "bourgeois" misrepresentation and falsifications

of history as the conception of a basic difference in the development of the East and the West, and of the inherent backwardness of the peoples of the East. The laws governing the evolution of peoples were held to be the same throughout the world. It had been conclusively established for instance, that between the sixth century B.C. and the fifth century A.D. the economic system which predominated in Central Asia was based on slavery and in the sixth century A.D. slavery gave way to feudalism.

In his concluding remarks Zakhidov, President of the Uzbek Academy of Sciences, acknowledged that the session had done much to improve historical research on Central Asia and Kazakhstan. It had brought together scholars from Central Asia and the rest of the Soviet Union and had demonstrated the growth of scientific establishments in Central Asia. It was agreed that the next conference should be devoted to discussions on the Soviet period in the history of Central Asia and Kazakhstan.

REVIEW

STRUGGLE FOR ASIA by Sir FRANCIS LOW. (*Frederick Muller Ltd.*). 15/- net.

Reviewed by Sir FRANK BROWN.

The multitude of newspaper readers in this country who limit themselves to the perusal of the popular press know little of events in the vast continent of Asia, since references to them are usually limited to the more sensational happenings. The vital questions relating to the Continent which have arisen from recent events, and notably the deliverance of some Asian lands from Western control, are discussed and explained in this volume in terms that can be well understood by the ordinary reader. The preparation of this companion volume to Mr. Vernon Bartlett's "Struggle for Africa" could not have been entrusted to more reliable hands. The author's knowledge of Asia dates back to his military service in Mesopotamia in the 1914-18 war. After thorough training on the staff of the Aberdeen Free Press, Sir Francis went out to Bombay in 1922 to join the editorial staff of *The Times of India*. He remained there for a quarter of a century during the last sixteen years of which he filled the editorial Chair. Occasionally he calls on his own experiences to enable the reader to see behind the scenes, as for instance in recalling the vehement anger of Mr. Jinnah in a private talk with him in 1937. This outburst arose from the announcement of the refusal of the Congress leaders in the eight provinces where they gained majorities to admit Muslim League representatives to their Cabinets.

That chief attention in this survey should be directed to the influence of China and India on the future of Asia is fitting seeing that together their peoples form more than one-third of the human race, and that many perplexities arise from the actions of the Peking Government. The chief issue that Sir Francis raises is that of China's attitude towards the policy pursued by Mr. Nehru "the greatest figure in democratic Asia" of peaceful co-existence and non-alignment. Sir Francis comes to the conclusion that peace in Asia depends on China's attitude towards three major problems. These are the position of the millions of Chinese in other Asian lands; Communist infiltration and the encouragement of subversive movements outside China; and her policy towards lands over which the old Chinese Empire claimed suzerainty. In respect to the second of these questions the author points out that Chinese settlers in Burma, Indonesia, Indo-China, Malaya, Siam are accorded representation in the so-called National Congress of China. The success or failure of India's external policy will largely turn on the extent to which its underlying principles are accepted by the Peking Government and adopted both in letter and spirit.

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Kashmir Revisited

Lt.-Colonel LORD BIRDWOOD, MVO

AN ADDRESS on Kashmir was given by Lt.-Colonel Lord BIRDWOOD to a joint meeting of the East India Association and the Over-Seas League at Over-Seas House, Park Place, S.W.1, on Thursday, 23rd June, 1955. Sir OLAF CAROE, KCSI, KCIE, took the Chair.

Opening the meeting the CHAIRMAN said that as the audience knew Lord Birdwood so well he would not go into details of his career. He hoped that the speaker would in some way be able to link up the Kashmir problem with the, perhaps even more dangerous, question of the division of the waters of the Punjab, as the two things are very closely connected.

LORD BIRDWOOD: I think that the most effective way I can emphasize the nature of the Kashmir problem is to draw your attention to the fact that the map behind me here is identically the same which I used about three years ago when I first started to be interested in this matter. Three years ago it was said that the Kashmir problem was both dramatic and dangerous—dramatic in that had the two countries concerned gone to war, there would have been no precedent for two full member states of the Commonwealth fighting each other, and dangerous in that if they had gone to war a whole series of understandings and loyalties as between Pakistan and the Middle East and India and the Far East would have become involved; not necessarily formal understandings but sympathies, and in that way the Kashmir question might have become a focus in the international situation, in much the same way reflecting the division of the world as both Korea and Formosa have done.

Seven years have now passed since we first heard of this problem, and in those seven years tempers have cooled. That is not to say that the situation could not once again become very formidable. It is like a wound that is healing if left alone; but give the wound a prod and it will suppurate and burst. If, for instance, the two Prime Ministers next time they meet are a little less polite to each other than they were this time the thing might break out; if they in turn receive prods from behind from people like the Hindu Mahsabha or the Jan Sangh in India or from a very vigilant Pakistan press, then again it might break out. The situation is there in the background all the time. Time may be the healer; on the other hand time may not be the healer, and that is really all one can say of the future.

This afternoon I am not going to attempt what I have done before, a straightforward factual account of events; I am assuming that this audience probably knows the story: the sequence of events starting from 1947; the tribal invasion, the accession to India, the appeal to the United Nations, the arrival of the United Nations Commission for India and Pakistan, the barren attempts of that Commission, the efforts of General McNaughton the Canadian, the efforts of Sir Owen Dixon, the Australian lawyer, the gallant efforts of Dr. Graham, who kept on coming back time after time, and finally the effort of the Commonwealth Prime Ministers in London. I cannot go into the details of that story this afternoon because I have done so several times before and I am assuming that the general picture is known. So instead what I propose doing is to pick on one or two facets of the situation which are less understood, corners here and there which will perhaps paint the picture a bit more vividly. I myself have frequently been guilty of conveying misconceptions and misunderstandings and I welcome the chance to put these right.

Now, in so far as history is indivisible, I want to pick out a bit of ancient history. We have been apt to say that the Kashmiri is a hypnotized rabbit and has been so always, yet if we look back into history we find a period before the Muslim invasion of India, about 500 years under Hindu dynasties, particularly in the time of a Hindu King called Lalitaditya, when so far from the conquests being into Kashmir they were from Kashmir into India. After the Hindus and before the coming of the Moguls, there was a Mohammedan King, Zain-ul-Abul-Din, under whose patronage the arts flourished; there was a library and a university; and taxes were collected on a fair basis. So before we make certain that the present Kashmiri, who has suffered successively from an Afghan Durani dynasty, a Sikh dynasty and a Dogra Hindu dynasty, is really a kind of mesmerized mouse, let us remember that past. I am quite certain Sheikh Abdullah must have recalled it during the phase when he was switching over from his loyalty to India and playing with the idea of independence.

I want to pause for a moment on the era of Gulab Singh, the first of the Dogra Rajput dynasty in Kashmir. I have said that Gulab Singh was a tyrant, and that when we handed over Kashmir to him by the Treaty of Amritsar in 1846, we permitted an act of doubtful wisdom and integrity. But, on second thoughts, and after having read Dr. Panikkar's "Memoirs on Gulab Singh," I am not sure that I am right. Gulab Singh had to have his reward; he had assisted us not only in our war against the Sikhs in 1846 but when we marched an army through the Sikh country to fight that ridiculous first Afghan War. Had we taken over

the country we would have found ourselves in complete geographical isolation because in 1846 we had nothing west of the Sutlej river. So I would say of the Treaty of Amritsar, which gave all the land between the Indus and the Ravi to Gulab Singh, that it was regrettable but probably inevitable under the circumstances. I would remind you that it was Gulab Singh who conquered, in 1834, the great tract of country called Ladakh, the Buddhist country, not on behalf of the Sikh Ranjit Singh but on his own behalf, and having conquered Ladakh he turned north where he was never actually successful. The Ladakh campaign in particular is of fascinating interest to students. He had a Dogra General, Zorawar Singh, who over-stretched himself and started to advance into Tibet, and there on a pass 15,000 feet high his men met their fate in much the same way as Napoleon's men met theirs in front of Moscow. But the significance of that era is this, that any serious student of the Kashmir problem will immediately ask himself, "How did one country—a geographical and political monstrosity—come to be enclosed within this long frontier embracing communities as varied as Buddhists, Muslims, followers of the Aga Khan and Hindus?" And the answer roughly is that it all happened through Gulab Singh's conquests between the years 1834 and 1844.

I would now remind you of the actual composition of the State. I think for an intelligent understanding of the problem I must, in rather a school-masterly way, divide up the State into its various components. Starting from the north in Ladakh you have 40,000 Buddhists under their leader the Shushok Lama Bakula. The Lama Bakula sits in the Assembly on the Indian side of Kashmir as the representative of his people, and he occasionally addresses the Assembly in a language that nobody else can understand. It is difficult to find out exactly what sort of a man he is; but it does seem, from an authoritative view, that the Lama is a bit of a tyrant. He is ambitious and unscrupulous, and it happened to suit his interests to fit in with Abdullah's scheme of enticing the Ladakhis into the fold and to accept their leadership in the Kashmir Assembly. Having been put on the throne, so to speak, by Abdullah, he was very quick to renounce Abdullah immediately the change took place in 1953.

The remaining northern territories can be regarded entirely as Moslem—mostly Shia, with some followers of the Aga Khan—totalling about 270,000. Coming south you have Jammu Province of which you could say before the war that of the two million inhabitants 1,200,000 were Muslims and the remainder non-Muslim. You could fairly divide the Jammu Province by the Chenab river and say to the south and east there was mainly a Hindu majority, and to the north and west mainly a Muslim majority. I am quoting the figures of the 1941 census, but of course

those figures have been considerably modified as the result of happenings since 1947. Recently I asked what the Muslim population in Jammu was at present and whereas I gather it was probably about 20,000 before 1947, it is only three or four thousand to-day.

Finally, Kashmir Province, which includes the valley around Srinagar, the prize regarded as worth the whole of the rest of the State put together. The 1941 figures were, I think, 1,800,000, of whom some 120,000 could be regarded as non-Muslims. So you have an overwhelming Muslim preponderance in Kashmir Province, and a total of four millions over the whole State of whom 3,200,000 could be regarded as Muslim and the remaining 800,000 as non-Muslim.

But now having emphasized those figures I would emphasize also, not that I am going to moralize on the question of the secular state against the religious state, the fact that before the Mohemmedan invasions the country was Hindu. It was later converted and India naturally, from her point of view, recalls those ancient days. In India is published a monthly magazine called *Kashmir* which very carefully and skilfully avoids all reference to politics, but instead reminds readers of the ancient Hindu culture, arts and crafts and Hindu monuments. As we all know, the pilgrimage year after year still goes on to the cave at Amarnath.

I must remind you also of the general conditions which provoked the rising of the peasants in 1930, when saffron, silk, tobacco and wine were all taxed up to the hilt; when the incidence of taxation was three or four times what it was in the neighbouring Punjab, and when the slaughter of a cow by a Muslim was punishable by death. In 1930, for the first time in many centuries, the voice of the Kashmir peasant was heard, and the voice that spoke for the Kashmir peasant was the voice of Abdullah. Abdullah had returned from his studies at Aligarh University and had thrown himself into the task of bringing justice to his Muslim community; justice in matters of representation and justice in matters of the depredations of landlords. It is important to realize that, because Abdullah himself I believe to have been completely non-communal. Those first efforts of his were not on behalf of Muslims as such but on behalf of justice. I quite believe that Abdullah, once he is satisfied that an injustice has been committed, is prepared to fight against conditions of injustice whether it be in the interest of Muslim, Sikh or Hindu. That is the one thing you can say of Abdullah; he was non-communal. Abdullah is a man of many parts. If I could attempt an assessment in a few adjectives I would say that he is ambitious, vain, conceited, has a high sense of the value and technique of publicity, is lacking in judgement, chooses the wrong men and cannot judge a situation. At the Security Council he thought the same kind of oratory that had won over the

Kashmir villager would impress the United Nations. But, when you have said all that, I have heard English friends who were close to him say, that on the whole, the attractions of the man for them outweigh his disabilities. At some time he has got to be released, and his release might well throw the situation into the melting pot again because I have heard it said that once he is released the Kashmiri peasant will follow him whether his ideas lead towards India or Pakistan or towards independence. I do not know if this is true, but it is what I have heard from a fairly authoritative source.

As a result of those agitations in 1930, the Glancy Commission was set up and an Assembly established. Abdullah founded his Muslim Conference Party and took up most of the elected seats for his Party in the Assembly. About eight years later, in 1939, Abdullah suddenly realized the weakness of a political party with a religious background so he broke away and formed his own National Conference Party. Thereafter you had two parties in Kashmir—the Muslim Conference and the National Conference—both seeking the same goal—to dislodge the Maharaja, or at least to achieve a far greater recognition of the Muslim masses—and both defeating their own objects because they were so busy fighting each other. This gave rise to some very ridiculous situations such as in 1946 when Abdullah was put in jail on account of the “Quit Kashmir” campaign he had developed against the Maharaja; and at the same time Ghulam Abbas, the leader of the Muslim Conference, refrained from any agitation and thereby gave the Dogra dispensation tacit support. Such a situation could not be allowed to continue and later Ghulam Abbas found himself in jail with his late colleague Abdullah. It is a thousand pities that they were then not able to settle their difference in prison; if they had done so we would have had a very different situation in Kashmir to-day. We would have had two governments, one in Srinagar and Jammu on the one side, and one in Muzaffarabad on the other, who would have been prepared to talk to each other. As it is these two Governments are as far apart as Chiang Kai-Shek and Mao Tse-tung.

I now pass on to Mr. Jinnah's part in this problem. Mr. Jinnah was a man who took the view that Princes should be regarded as Constitutional institutions and that it was not up to his Muslim League to interfere in the affairs of a State. In 1944 the two Kashmir Parties, the Muslim Conference and the National Conference, invited Mr. Jinnah to arbitrate on their behalf. He went to Kashmir for two months and gave his verdict, which could equally well have been given, so far as I could see, in two hours from either Delhi or Lahore. His verdict was to advise the Muslims of the State “to unite around one banner, one platform and one organization . . . ninety-nine per cent of the Mohammedans who met me

are of the opinion that the Muslim Conference alone is the representative organ of the State Muslims." That, of course, infuriated Abdullah because in fact Mr. Jinnah's figures were not quite accurate. Thereafter, I cannot help feeling, Abdullah and Jinnah could never have got together as now it became a matter of pride. Neither one nor the other was prepared to make the first move. But what of the Maharaja? Had the Maharaja realized or appreciated the very different attitude the Muslim League took to the whole problem of the Princes, he would have seen that it was going to be in his interests to see Mr. Jinnah, from whom he would have received far more sympathetic handling than he later got from the Government of India. Mr. Jinnah did, on one occasion, allow himself to depart from his constitutional attitude and that was on the occasion when he was leaving the State in 1944. He said, "As I said at the moment I reached Jammu, it is not the policy of the Muslim League to interfere with the internal administration of this State, or the grave and serious issues that face the Maharaja and his Government, as between him and his people, but we are certainly deeply concerned with the welfare of Muslims in the State, and I must say that even a casual visitor cannot but be shocked to see the condition of the people, even in matters of their elementary needs and necessities." That was as far as Jinnah ever allowed himself to go in open criticism of the Maharaja's regime.

I pass now to the tribal invasion. I am going to draw your attention to two facets of this tribal invasion which had not struck me before. One of them occurred to me when I climbed the pass where the road crosses over from Abbottabad and drops down a spur to Muzaffarabad at a place called Lohar Garhi. I got off the main road and climbed into the trenches that the Dogra State troops held at the time, and I came to the conclusion that those lorries, carrying about two or three thousand tribesmen groaning up the hillside from Muzaffarabad and of necessity having to travel very slowly, could very easily have been picked off by a staunch battalion dug into those trenches and determined not to leave. The lorries would have piled up on each other, the tribesmen would have come out and, fleet as they are on the hillside, they would have left most of their numbers dead. But what happened? The particular battalion at that point was the 4th Infantry Battalion of the State, half Muslims and half Dogras, two companies of each. The Muslim companies turned round and killed their Dogra Commanding Officer and went off to their homes, leaving two companies of Dogras in isolation without a commanding officer, and perhaps in the circumstances they naturally broke too. The second facet about this tribal invasion you will remember is that the raiders started to waste time round Baramulla. There they

perpetrated that horrible slaughter at the convent and wasted a day collecting loot. Now had they not lost twenty-fours at Baramulla they would have been in Srinagar before the Indian airborne operation could take effect, and before the first battalion of Indian troops landed they would have been in control of Srinagar. What then would have happened? I asked this question of the Muzaffarabad Government. They drew my attention to the fact that there were at Srinagar then various members of the Muslim Conference in jail. Muslim police officers and Muslim officers of the State forces were held in camps, and these would either have escaped or been set free. There would have been bloodshed undoubtedly, but with elements of the Muslim Conference leadership free it is quite impossible to believe that their interests would not have been other than to have brought the situation under control. Pakistan would have been bound to have received an appeal, and it is also impossible to believe that Mr. Jinnah's influence would not have been other than immediately to restore the situation. There would have been bloodshed but I do not think there would have been the complete collapse and chaos that the Indians predicted. In September the Maharaja had got rid of his very loyal and painstaking British Commander, Major-General Sir Henry Scott, and had himself assumed responsibility for the disposition of his eight battalions. He proceeded to sprinkle them in penny packets round his frontier, with the result that they were not strong enough in any one position to be able to take effective action. But it was perfectly natural that India should have flown in troops at a moment's notice. I am quite convinced that it was not a preconceived plan, and there is the testimony of the three British commanders of the three services at Delhi to that effect. In fact the whole thing was laid on in about just over twenty-four hours. I do not think India's crime was to fly in those troops; the sin was a sin of *omission*. Why was it that nobody from the highest in the land down did not bother to get on to the telephone to Karachi when they first heard of the tribal invasion and say to the men in Karachi, "Here is a problem for us both to tackle; a joint problem, possibly an international problem. It is in both our interests that we co-operate to deal with this." That is what one could have hoped for.

And so to the 1948 war, a stupid and extraordinary sort of war, where you had two member states of the Commonwealth fighting each other in Kashmir, and yet scrupulously avoiding fighting each other across their mutual frontier. It was Pakistan's claim that although all operations would emanate from Rawalpindi, there was no shot fired from off Pakistan soil; it was all done according to the rules on Kashmir territory. But that situation did, of course, put India at a very great strategic disadvantage. India had to develop a line of communications from her railhead

at Pathankot right up to Poonch, whereas Pakistan had only to choose one of several possible points of attack, and not have very far to move her troops in doing so. India had to maintain a long tenuous line of communication. It was an advantage not unlike the advantage enjoyed by the North Koreans in their knowledge that Manchurian soil north of the Yalu river was immune from attack. The significance of this state of affairs is that in 1953 Pandit Nehru raised the question of American Aid to Pakistan and said, "This throws the whole situation into the melting pot again so far as I am concerned." He was blamed for doing so but I would draw your attention to this; that if Pandit Nehru was not to pin his faith in Mohammed Ali's word, and he did not, his only alternative was to turn round to his Generals and say, "What is the significance of this aid to Pakistan?" and in view of this very great strategic disadvantage to India they would have been neglecting their duty as soldiers had they not said to him that it was putting India at a very great disadvantage. If you are to regard the problem as a military one it is the only advice they could have given, being as they were, not concerned with politics but only with the hard facts of strategy.

One more slight misconception to my mind is worth referring to. It was said that if Hyderabad and Junagadh had been taken over by India why was it that India did not allow Pakistan to take over Kashmir? I do not think the analogy is quite valid. Hyderabad was surrounded by Indian territory; Junagadh was surrounded on three sides by Indian territory and on the fourth by the sea. India could develop communications with Kashmir in a way that Pakistan could never have developed them between Hyderabad and Junagadh. Hyderabad and Junagadh depended upon India for communications, trade and for life itself. I suggest that a more intelligent comment on that particular aspect would be to say; how wise it would have been of Mr. Jinnah had he renounced Junagadh's accession and how much stronger then would have been his hand when he was arguing with Mr. Nehru that India was wrong to take over Hyderabad, or that Pakistan should not take over Kashmir. That, I think, is to put that particular aspect in its true perspective.

And now to mention the division of the waters of the Punjab. I was lucky in that in April I met Mr. Iliffe of the International Bank in Pakistan and had a long talk with him. My conclusions from that talk, and also from a certain amount of work I had put into this question before, are that there is a misconception over the part that Kashmir has to play. It is not a problem of one river, or a simple problem of the people upstream depriving the men down-stream of the water; it is a problem of six rivers, the Indus, Jhelum, Ravi, Chenab, Beas and Sutlej. It is a problem not of moving water up and down but sideways. Of those six

rivers three only, the three western ones, pass from Kashmir soil into Pakistan. It is quite true that if India was to lap up the last token corner of Azad Kashmir, she would also have possession of the headworks of the Jhelum River Canal system at Mangla, and she would be in a strong position to damage the headworks if she so desired. But it is no good possessing water unless you can remove it. Kashmir is not a country that wants much more water. If she were a country like the Sudan with great open deserts waiting for the water to turn the desert into green fields, I would say that the prospects for Pakistan were gloomy, but it is no good storing the water unless you can remove the water to Indian soil, and I do not think India can do that or would wish to do it. The problem is really that the Sutlej river is going to be exploited to the full by India and that is going to mean, of course, that a lot of soil down in south Pakistan, particularly in Bahawalpur State, is going to be in jeopardy for its water through water being drawn off the Sutlej. India therefore, under International Bank persuasion, has to compensate Pakistan—the phrase is “to the extent by which she will benefit”—in order to enable Pakistan to build link canals from her three western rivers across the country to her southern districts, which would be deprived of water through the development of the Sutlej. That really is the extent of the water problem. This is a bit of over-simplification for there *are* certain schemes in Kashmir which could be developed to Pakistan's interest. There is a great catchment area at Diangadh which, if developed, could save Pakistan the trouble of having to build some of these link canals. But that is not a problem of depriving Pakistan of existing sources of water; it is merely a matter of having to develop laborious and costly schemes under International Bank guidance bringing water across from the Indus to the Jhelum when there is a ready-made scheme which, if India and Pakistan could agree, would be to Pakistan's benefit. Unfortunately, we cannot see India spending a vast sum of money on developing a scheme from which she is not going to benefit at all.

That is by way of a diversion, but it is probably one which was expected. I have now reached the point where we come to the present political situation, and I would initiate the position by giving my own impressions of those two Governments, the one in Muzaffarabad and the one in Jammu and Srinagar. The Muzaffarabad Government only has what amounts to about three districts. It is a very modest little set-up and the accusation has been made that it is not representative. Why have there been no elections? Well, if you have elections you have to have an Assembly, and if you have an Assembly you have to have the whole paraphernalia of government, whether it only be three districts or thirty which are concerned, and I suggest that the Muzaffarabad set-up cannot possibly afford

the expense of a full sovereign state government. Nor, indeed, is Pakistan in a position to subsidize that portion of the country to enable Azad Kashmir to do so. Not to do so is, in fact, in Pakistan's interests. Pakistan's view is that the situation must be regarded as fluid and flexible, and to set up a properly elected government in Muzaffarabad would be to admit the permanent partition of the country—in other words to do what we have blamed the Indians on their side of the ceasefire line for doing. There is this, however; that it invites comparison between the two divisions of Kashmir, and in that comparison the Azad side suffers. Where, I think, there is legitimate room for criticism of the Azad Kashmir Government is that it is not really representative of Kashmir sentiment as a whole. It has a President, Colonel Sher Mohammed, a very gallant soldier who fought well in the campaign of 1948. He is not a man from Srinagar but from Poonch, and I felt rather that had they got a dynamic leader as President or a dynamic Minister with a real stake in the country who could say to his people, "The one thing we are determined upon is a policy of getting back as fast as we can to the land that belongs to us," they would have made a deeper impression. As it was I felt that they were too much of a caretaker government without sufficient force or drive to the claim that they really wished to get back to the other side.

Now compare all that with what is happening on the other side. You have an Assembly elected in October 1951, by a process which by no stretch of the imagination could have been called democratic, and I think that Mr. Nehru is quite prepared to admit that it was not. But, having admitted that, you have to concede that it has achieved a great deal. It has consolidated itself so well that it is going to be very hard to dislodge. It includes two men, Mr. D. P. Dhar and Ghulam Mohammed Sadiq, who are men of great capacity; they have been accused of being Communists, but I do not think they are. After all, your typical Communist leader has to be in touch with an outside power; he has to have the orders coming through from the Centre somewhere or somehow, and there is no indication of that at all. My attention was drawn to the fact that the Indian Army was responsible for controlling the passes into Kashmir. They also drew my attention to the fact that they gave those unfortunate Khazak refugees asylum and help. Perhaps it was rather grudgingly given at first but nonetheless the help was given and they said they had had protests from the Chinese as a consequence. Those were not the actions of real a hundred per cent Communists. No, what those two men are interested in is Left Wing, very Left Wing Socialism, applied with totalitarian methods. They are men with no other interests outside their work, their work is their hobby, and when I challenged them that

they might be playing into the hands of people who deprive communities of the liberties of their minds, they said, "So far as we are concerned the liberty of our minds means the liberty to be able to carry forward and see through those schemes we have been able to initiate in the interests of the Kashmiri." I believed them. They did want to do that, and so far as I could see, they were men of ability who would do it. Now here you are up against a problem of political morality such as we are frequently faced with in different parts of the world. It could be argued that it is in the interests of the Kashmiri to see that nothing should be done to jeopardize schemes heavily subsidized by India such as the Sind Hydro-Electric scheme, the Banihal tunnel, the floodwater relief canals and so on. And what a temptation it is, when money is no object so to speak, for men of ability to exercise power and to continue to exercise it, and to claim that it is in the interests of the Kashmiri that they should be allowed to do so. On the other hand you have the other view that democracy, if it means any thing at all, means the right to make a wrong choice or a right one, to learn through experience; the right to make mistakes possibly even to put the clock back. Those are the two issues and I leave them in the form of a question, a political morality question, which is quite difficult to answer.

What is the attitude of Pakistan to all this? There are signs that the Pakistan attitude has been slightly soft-pedalled recently. Is it perhaps because of a doubt as to how the plebiscite would go, or is it a realization that a lot of money would have to be spent on the country? I think it would help the Pakistan case, even at this stage, if they gave some indication as to what their intentions are in relation to these schemes of development which have gone forward on the Indian side, if, as is possible, a plebiscite should go in their favour. Have they got the money to support these schemes? More particularly, what are they going to do about the personnel? Are they going to scrap the whole of the Legislative Assembly—bogus as it was when it was set up—are they going to scrap these men of ability and put in their own men? I would say a certain amount of fire has gone out of the Pakistan case with the departure of Sir Zafrullah Khan. While he was there you could be quite certain that the Pakistan case would be put energetically and forcibly at all times. I do not say that this will always be so. There seems to be emerging a new interpretation of the plebiscite. When Mr. Mohammed Ali went to Delhi he gave one interpretation and that was Mr. Nehru's interpretation, and Mr. Nehru's interpretation these days appears to be that you cannot trust an ignorant, undeveloped people to take the responsibility of such a grave matter as their own future, therefore there must be some intermediate kind of forum which will take it for them. Whether he meant

the existing Constituent Assembly I do not know, but that is what he said to me, and that to my mind is what has emerged from the Mohammed Ali-Nehru latest conversation. When he got back to Karachi Mr. Mohammed Ali said something very different indeed. His words were to the effect that the overall plebiscite still stood and when asked what part the Security Council played in all this he replied that it has never in fact come away from the Security Council. So, as I see it, one does not really quite know what Mr. Mohammed Ali intends himself as regards the future of Kashmir. I pin my faith on a small nucleus of intellectual and conscientious politicians round about Delhi who still think in terms of a democratic choice being made, right or wrong. Such a man is Prem Nath Bazaz who publishes the Monthly called *The Voice of Kashmir* who, although he hated Abdullah, attacked the Indian attitude of locking him up as a matter of principle. As a matter of principle, he says that the Kashmiri should be allowed his choice. He is supported by certain political elements in India such as the Praja Socialists and others. For myself, I would like to see a Round Table Conference of Kashmiris called, with Indians and Pakistanis observing; whether that will materialize or not I doubt very much. One can always say what should happen but very seldom what will happen, but, if it is true that the Pakistan demand is not quite so clear and definite as it was, then perhaps time will be the great healer. Who are we to moralize about the situation, rather should we be grateful that we have been spared the spectacle of two Commonwealth countries lying at each other's throats, either physically or metaphorically, a situation which might have shaken the Commonwealth to its foundations in view of the future evolution of our Commonwealth of Nations.

On these occasions I usually look to Burke for some guidance, and he very seldom lets one down. I find this quotation from Burke, "The individual is foolish and the multitude is foolish when it acts without deliberation. But the species is wise and when time is given to it, it will always act right." Let us hope that in the case of Kashmir Burke is right.

SIR OLAF CAROE thanked Lord Birdwood for his very interesting survey of the situation and said, viewed historically, it was a pity that a plebiscite had not been held in Kashmir in 1947, as was held in the North West Frontier Province. Before asking for questions, there were two points Sir Olaf said he would like to mention. "The first is that Sheikh Abdullah always reminds me of a sort of Abdul Ghaffar Khan and Dr. Khan Sahib rolled into one. Dr. Khan Sahib took one view of the situation in 1947, and now he is extremely eminent in Pakistan. May we not hope that he will find in Sheikh Abdullah a kindred spirit and that

together they may find a way forward? The other point I would mention refers to the canals. It is absolutely true that, if you hold up water in a river and make a reservoir, that does not in itself affect irrigation lower down, but there is one place up in the Himalayas on the Chenab, and I have this from the engineers, where it is quite possible to take water across from the Chenab to the Ravi. That would put the water into India. As for taking water from the Indus into the Jhelum, about which people talk so glibly, this cannot be done because of the Rawalpindi plateau 1,000 ft. above the rivers and 100 miles wide, while further south, below the Salt Range, it is equally impossible, even if it would be any use, because the Thal irrigation system gets in the way."

Mr. AZIZ AHMED, from the Pakistan High Commission, stated that the discussions between Mr. Jinnah and Sheikh Abdullah had been most cordial and Sheikh Abdullah had almost agreed to merge the National Conference and the Muslim Conference parties. Mr. Jinnah, however, thought that Sheikh Abdullah was much too closely associated with the Indian National Congress and it was not possible to come to an agreement. He refuted the imputation that Mr. Jinnah had spent two months in Kashmir as a guest of the Government, and stated that Mr. Jinnah had paid his own way. Regarding the accession of Junagadh, Mr. Ahmed disagreed with the speaker's point of view and maintained that it would have been perfectly feasible for Pakistan to establish communications with Junagadh by sea.

Lord BIRDWOOD thanked Mr. Ahmed for throwing some light on Mr. Jinnah's visit to Srinagar; his information regarding the visit had been taken from a book called "Struggle for Freedom in Kashmir." "As regards Junagadh," Lord Birdwood said, "I am afraid you will not convince me. I think I am right in saying that the percentage of Hindus in Junagadh was a greater percentage than even the Muslim percentage in Kashmir, and I would still press the point, how wise Mr. Jinnah would have been to have foregone that accession immediately. I realize that by sea Junagadh is very close to Karachi, but at the same time it is not a very practical road and there is no common frontier with Pakistan."

Mr. AHMED asked Lord Birdwood if he had spoken to any of the Kashmiri peasants during his visit to that country, as reports received show quite plainly that if there is a plebiscite they would vote for accession to Pakistan.

Lord BIRDWOOD: I did speak to any number of Kashmiri peasants and my impression was that west of Srinagar a plebiscite would go to Pakistan. I am not absolutely certain about the outcome of a plebiscite in Srinagar itself, as some of the boatmen, traders and peddlers have profited very much in these last few years from a tourist trade heavily subsidized by India.

Mrs. BARNES stated that when she was in India recently some effort was being made to meet the demand for elections in Azad Kashmir. She asked whether these had been held or any progress to hold them made.

Lord BIRDWOOD said he thought District Board elections had been held, but he had not meant to imply in his remarks that the demand for elections was from Azad Kashmir itself so much as from outside the country. There had been criticism from India and certain elements in Pakistan for elections in that area.

Referring back to the river question raised by Sir Olaf Caroe at the beginning of the discussion Lord BIRDWOOD said: The scheme for the Chenab and Ravi is, I think I am right in saying, a scheme outside Kashmir territory, the Mahru tunnel scheme which involves tunnelling outside Kashmir. If India is to play the game by the international understanding then the Chenab is not to be tampered with in any way, as this river is regarded as the main artery of the whole canal system. India must, therefore, forego the plan in which the original intention was to develop land in Rajasthan from that particular scheme, and the understanding is that she will forego it.

With regard to the tapping of the waters of the Indus and Jhelum, a plan to build a reservoir at Darband was in fact mentioned to me by Mr. Iliffe. Such a scheme would cost something like eighty crores, but the idea was being entertained by the World Bank.

Sir OLAF CAROE: "But from there how do you proceed? By tunnel under 100 miles of plateau? I should be sorry to be the engineer sponsoring such a scheme."

Miss GEDGE asked if Kashmir was still peaceful enough for tourists to spend a happy time there as one did before partition.

Lord BIRDWOOD: India claimed that 35,000 tourists visited Kashmir last year, but of that number many were parties organized by the Indian Government, and in that sense the figures are rather misleading. There

is, of course, not the same number of European visitors. It is now a tourist trade of a different nature to what we regard as tourists. Visitors from Pakistan find it very difficult and in the case of Americans they are inclined to be followed around to see what they are up to. Everybody, of course, has to go through the business of getting permits which sometimes takes only a day, sometimes as much as a few weeks, so that there are qualifications as to the success of the tourist trade in Kashmir.

Lord PETHICK-LAWRENCE moved a hearty vote of thanks to Lord Birdwood for his most interesting address. "It is always good," he said, "to get the facts from someone who knows them and I am sure you will agree that the speaker has an unparalleled knowledge of the situation. I think he has shown a great breadth of view and impartiality in what he has said on this great and difficult problem."

Dr. Donald Soper at Students' Party

Dr. DONALD SOPER, Superintendent, West London Mission, was the guest of honour at a tea party for students held at the Indian Students' Hostel, 41 Fitzroy Square, W.1., on the 14th June, 1955. Miss E. Gedge, Member of Council of the East India Association, presided and in her introductory remarks spoke of the great need for friendship and understanding among the youth of the world.

Dr. Soper in his short address to the large audience of Indian and Pakistani students emphasized the importance, during the process of growing up, of trying to break out from one's own national attitude to world problems and affairs. Such an attitude was narrowly circumscribed by ideas of caste, colour and creed and the younger generation should make a successful attempt to regard themselves as citizens of a much wider community by meeting and trying to understand the people of countries other than their own, and by so doing gain a better perspective of their problems which would in turn lead to a more liberal judgement and assessment of the world situation, and their own national affairs.

Western civilization in particular, Dr. Soper suggested, must see itself and its problems against the background of a rapidly growing world.

It was vitally necessary to discard preconceived and static attitudes of mind handed down from past generations or else remain for ever backward in ideas and out of tune with the changing world around us. For the world in which we found ourselves to-day was much more complex, the tempo far swifter than that in which our fathers lived and it was therefore important for us to adapt not only our material way of life, but our ideas and attitudes of mind, to this new way of life if we wished to live in peaceful co-existence. The Americans, he thought, had found the right approach in their regard for all problems as a challenge to their ingenuity and strength.

Dr. Soper described the appalling slum conditions he had seen in his visit to Kingston, Jamaica, and said, "in such circumstances the Communist creed could well take root and flourish, for Communism is the result of conscience trying to provide an answer to insoluble problems." Neither Communism nor Nationalism could solve the human problems which existed, and he emphasised once again the need for approaching these moral issues on the wider basis of world humanity. He made the tentative suggestion that perhaps the Indo-Pakistan difficulties would be resolved if both countries made an effort to see their differences against a wider backcloth than that afforded by a narrow nationalistic frame of mind.

Turning to world affairs, Dr. Soper said these had become so complex and intermingled that we must "hang together or hang separately." There must be equal status for all; equal opportunity regardless of nationality. All our great schemes for humanity must founder and fail unless they were built on a sound framework of practical friendship. There was much talk at present of the hydrogen bomb, and a race between the great powers to build bigger, better and more of these ghastly weapons. In view of this pre-occupation by western powers with these devilish instruments of destruction, it was significant that Pandit Nehru, leader of a nation possessing no hydrogen bombs, nor any desire to join this mad armaments race, should be the one to act as peacemaker between hostile countries and take the initiative in many peace talks.

"We in the West have no monopoly of anything. We must build for the future on a much more charitable and wider basis. The principles of charity and friendship were preached both by Christ and Mahatma Gandhi, and it was now more than ever necessary to create such an atmosphere in which all members of this world could love and respect each other."

East India Association

THE EIGHTY-EIGHTH ANNUAL REPORT

DURING THE YEAR under review the Association continued to provide a valuable platform for the discussion of Indian, Pakistani and Burmese affairs, and in this and other ways to promote mutual understanding between the people of this country and of the three nations in which the Association takes a deep and sustained interest.

An outstanding event within the Association itself was the change in the Presidentship. At the last annual general meeting Lord Hailey agreed to re-election on the understanding that, in view of the calls on his time, he would be relieved of the office of President before the close of the year. The Rt. Hon. Sir Patrick Spens, KBE, QC, MP, former Chief Justice of undivided India, accepted the Council's invitation to succeed Lord Hailey and took over the Presidentship at the beginning of March. The Council are most grateful to Sir Patrick Spens for acceding to their request despite his parliamentary duties, and are confident that the Association will continue to flourish under his leadership. They acknowledge with gratitude the valuable services which Lord Hailey rendered during nearly four years of office. Despite his many other activities he found time to preside over several meetings of the Association, to attend a large number of them and frequently to take a prominent part in the discussions.

The Association was fortunate in having addresses during the year from two distinguished representatives of India and Pakistan, namely, Her Excellency Mrs. Vijaya Lakshmi Pandit, India's new High Commissioner in London, and the Hon. Mr. Mohammed Ali, Prime Minister of Pakistan. Mrs. Pandit twice addressed the Association, on the first occasion in July as President of the United Nations General Assembly, and secondly in January when a reception was given in her honour by the Association and the Over-Seas League on her assumption of the office of High Commissioner for India in succession to Mr. B. G. Kher. At both meetings, where Lord Hailey presided over crowded and enthusiastic audiences, Mrs. Pandit spoke of India's belief in peaceful co-existence and the building up of the kind of climate in which peace could grow. Referring to India's independence, Mrs. Pandit said that although Britain might have lost India as part of the Empire it had gained something which the Empire could never have given, "the friendship of 370 million people who are pledged to the same way of life as the one you follow." Mr. Mohammed Ali, who addressed a packed joint meeting of the Pakistan Society, the East India Association and the Over-Seas League during his visit to London to attend the Commonwealth Prime Minister's Conference in February, dealt with recent developments in Pakistan and emphasized that his country stood firmly on the side of the free democracies. The new

Pakistan High Commissioner in London, His Excellency Mr. Ikramullah, presided.

Many varied aspects of the welfare of India, Pakistan and Burma were dealt with by a series of able and well informed speakers. Sir Percival Griffiths drew the usual large attendance when in January he gave a graphic account of his latest visit to India and Pakistan. His comments on the Indian Budget were later reinforced by Mr. Geoffrey Tyson, CIE, who spoke on India's financial policy and planning. Mr. Tyson's address was marked by a notable contribution to the discussion by Sir Jeremy Raisman, a member of the Council and a former Finance Member of the Government of India, who stressed the dangers of deficit financing. The progress of education in India and of public health in India and Pakistan was lucidly outlined by Mr. H. C. Dent and Lieut-General Sir Bennett Hance, KCMG, KCIE, OBE, IMS(R) respectively. Both spoke from personal observation based on recent visits to the countries concerned. The complicated problem of the division of the canal waters of the Indus was admirably explained by Professor L. F. Rushbrook Williams, CBE, whose impartial handling of the issues involved was greatly appreciated. It is not often that the Association receives first hand information on what is happening in Burma, and all the more welcome therefore was the account by Mr. G. P. Brownie of the visit to that country of a British Trade Delegation. His audience was cheered by the encouraging picture which he gave of improved conditions in Burma.

Not for some years has the Association had a distinguished serving soldier as a speaker. Towards the end of the year the members of the Association, the Pakistan Society and the Over-Seas League had the privilege of listening to an exceedingly informative address by Field Marshal Sir John Harding, GCB, CBE, DSO, MC, Chief of the Imperial General Staff, on his impressions of the Indian and Pakistan armies of to-day. Field Marshal Harding visited both countries at the invitation of their respective Governments and the picture which he presented must have gladdened the hearts of members of the Indian Army of British days.

The problems of India, Pakistan and Burma in the wider setting of Asia were dealt with by three authoritative speakers. The Most Hon. the Marquess of Reading, Minister of State in Her Majesty's Government, gave a comprehensive and much appreciated account of the latest developments in the Colombo Plan, especially as they affected the three countries. A revealing light on the Conference of Commonwealth Delegates organized by the Royal Institute of International Affairs at Lahore was shed by the Rt. Hon. Patrick Gordon Walker, MP, who attended as one of the British representatives. The relations of India and Pakistan with the countries of the Middle East found an able exponent in Mr. H. E. B. Catley.

Other functions included a reception to Mr. B. T. Thakur, General Manager, United Commercial Bank, Ltd., Calcutta. Dr. R. Hingorani,

Vice-Chairman of the Council, acted as host at the reception and very kindly provided tea to a large gathering of British and Indian business men. His generous hospitality was greatly appreciated. Mr. Thakur spoke on the future of Indo-British relations. Members of the Association also participated in a meeting with the Royal Society of Arts, when the Sir George Birdwood Memorial Lecture was delivered by Mr. E. Maxwell Fry and Miss Jane B. Drew, two of the architects responsible for the planning of Chandigarh, the new capital of West Punjab. The Council again expresses its thanks to the authorities of the Over-Seas League for their co-operation and help in arranging for so many joint meetings to be held at Over-Seas House.

Sir Frank Brown, who retired owing to failing eyesight from the Honorary Secretaryship of the Association in February, 1954, was the guest of honour at a largely attended reception held at the Royal Empire Society in May. Lord Hailey, the President, and Sir John Woodhead, the Chairman of Council, paid tributes to the magnificent and devoted service which Sir Frank Brown had rendered to the Association for the long period of close on 27 years, and expressed their pleasure that he was to continue in office as a Vice-President and Member of Council. Lord Hailey presented Sir Frank with an illuminated address signed by the President and members of the Council. In his reply Sir Frank Brown said it was a great happiness to him to see present so many of his old friends. It was his full intention to continue to render service to the Association.

Thanks to the Hospitality Fund which again received a generous donation of £50 from Sir Cowasjee Jehangir, the usual arrangements were made for entertaining members of the large Indian and Pakistan student communities in London at a late afternoon party in each University term. All three parties were held in the spacious Mahatma Gandhi Hall of the Y.M.C.A. Indian Student's Union and Hostel in Fitzroy Square. At the first reception, held in July, Sir Alfred Egerton, Emeritus Professor at the Imperial College of Science and Technology, and Lady Egerton, described what they had seen during a visit to India of the progress scientific training and social welfare work. At the second meeting Mr. H. C. Dent dealt with India's educational problems, a subject of considerable interest to his young hearers. The third reception was arranged to enable the new President of the Association, Sir Patrick Spens, to meet the students, to whom he spoke on the rule of law. All the parties were largely attended.

The losses by death were heavy and included Major-General the Rt. Hon. Sir Frederick Sykes, who was President of the Association from 1941 to 1946 and a Vice-President at the time of his death; Lady Hartog, a member of the Council; the Rt. Hon. Lord Clydesmuir of Braidwood, Sir Godfrey de Montmorency, one of our oldest members, Sir Henry Craik and Miss Agatha Harrison. There were also some resignations.

The number of names on the register at the close of the year was 867. New members added during the year did not compensate for the losses, and the Council hopes that all members will do their best to secure additions to our membership roll.

During the year Dr. R. Hingorani, a member of Council, was appointed a Vice-Chairman in place of Sir Atul Chatterjee, who resigned owing to ill health. Miss Evelyn Gedge and Mr. M. A. S. Dalal, were co-opted to the Council to fill the vacancies caused by the death of Lady Hartog and the resignation of Sir Alfred Chatterton. These appointments require confirmation at the annual meeting. The members of Council retiring by rotation but eligible for re-election are: Lt.-Colonel Lord Birdwood, Sir Jeremy Raisman, Sir Henry Richardson, Sir John Tait, and Sir Alfred Watson.

It is open to any member to propose, at the annual meeting, a candidate or candidates to fill vacancies on the Council, subject to not less than fifteen days notice being given to the Honorary Secretary.

J. A. WOODHEAD,
Chairman.

FRANCIS LOW,
Hon. Secretary.

24th May, 1955.

As announced in the Annual Report for the year 1953-54, Sir Francis Low succeeded Sir Frank Brown as Honorary Secretary in March 1954. The Council wish to express to Sir Francis their appreciation for the efficient and enthusiastic manner in which he has carried out the duties of that office during the year. They trust that he will be able to serve the Association as Honorary Secretary for many years to come.

J. A. WOODHEAD,
Chairman of Council.

CORRIGENDUM

In the July issue of *ASIAN REVIEW*, page 186, it was stated that Sir Olaf Caroe asked Field-Marshal Sir John Harding "Whether the Scouts and Militia on the North-West Frontier were still controlled, as formerly, directly by the army." The report should have read—"Sir Olaf Caroe asked whether the Scouts and Militia on the North-West Frontier were still controlled, as formerly directly by the Governor. The Field-Marshal stated that he was not at all certain about this, but the impression he had received was that the Khyber Rifles were still controlled as formerly."

East India Association

THE EIGHTY-EIGHTH ANNUAL MEETING

THE EIGHTY-EIGHTH ANNUAL MEETING of the Association was held at Over-Seas House, Park Place, S.W.1, on Friday, July 22, 1955, with the Rt. Hon. SIR PATRICK SPENS, KBE, QC, MP, in the Chair.

The PRESIDENT, in calling attention to the second paragraph of the Annual Report—"An outstanding event within the Association itself was the change in the Presidentship"—said that in his opinion it was the outstanding event of the year, not from anything whatever to do with himself, but because the Association had now lost the services of one of its most distinguished Presidents. There was nobody more fitted for the office, or who had done it with greater grace and dignity on every occasion. "I am absolutely certain this Association owes him a debt of very great gratitude indeed for his services as President over a period of nearly four years."

The President drew attention to the extraordinary series of very distinguished persons who had addressed the Association during the past year. There had been the Prime Minister of Pakistan, Mrs. Pandit, High Commissioner for India, and the Chief of the Imperial General Staff Field-Marshal Sir John Harding; Sir Percival Griffiths, Mr. Tyson, General Hance and a great number of others. "Of course," Sir Patrick continued, "that is what we look forward to and, I was going to say, expect. But it is only because we have had two such outstanding men as our late Secretary and our present Secretary, that these events have been forthcoming. However much we owe to Lord Hailey I am quite sure he would agree with me that we also owe an enormous debt of gratitude to Sir Frank Brown, the retired Secretary and our present Secretary, Sir Francis Low.

It is these meetings, and the fact that our Honorary Secretary and Committee can get such distinguished people to address us, which makes this Association of the very great value I believe it is. To conclude my remarks on the Annual Report I would re-affirm that 1954-55 was a very remarkable year indeed in the distinction of those who were secured to address us and, in my view, it is entirely due to the great services of our Secretary and excellent Committee. I would draw your attention to the paragraph at the end of the Report, added by our Chairman of Council, as regards the new Honorary Secretary. It states that the Committee "trust that he will be able to serve the Association as Honorary

Secretary for many years to come," a sentiment which I feel sure is endorsed by every one of us. All I can say to him, talking as a very old politician, is that it is a very foolish thing to start a very high standard in anything as it is extremely difficult to live up to."

ADOPTION OF THE REPORT

SIR ALAGAPPA CHETTIAR proposed the adoption of the Report for the year 1954-55. He said he deemed it a very great privilege to have been given this opportunity of participating in the Annual Meeting, and heartily endorsed all Sir Patrick Spens had said on the great services rendered to the Association by its distinguished retiring President, Lord Hailey. As a citizen of India he took the greatest pleasure in welcoming Sir Patrick Spens as the new President and, although his connexion with that great country had been of short duration, he would be remembered as a very distinguished Federal Chief Justice of the undivided sub-Continent. "I am happy," Sir Alagappa continued, "that the great traditions he has left behind will guide India in the years to come. We will be able to build, in the course of time, our own pattern of life in accordance with the great ideals of justice which have been handed down to us." Human beings normally got a little nervous at the approach of old age, but institutions, unlike individuals, improved with the passing of the years. Every year that passed would, he hoped and prayed, give the Association strength to continue the useful work it was doing and so live up to the great ideals of its original founders.

It had been said that one of the lessons history teaches is that mankind never learns from history. That was indeed a most unfortunate thing, but, Sir Alagappa said, he was happy to realize that there had been a significant departure in this matter as far as Great Britain was concerned. In spite of the fact that India, Pakistan, and Burma had been given their independence and freedom and had become sovereign states, Great Britain continued her age-long friendship with them and was trying to do everything possible to help them to develop their countries according to their own pattern of civilization and so enable them to play their part in the community of nations. Indians, Pakistanis, and Burmans, he felt sure, were grateful to the East India Association for helping to maintain and keep alive this interest, and for affording them the opportunity of meeting British people from all walks of life.

Mr. VENU GOPAL seconded the proposal, and the adoption of the Report for the year 1954-55 was carried unanimously.

FINANCIAL POSITION

Sir JOHN WOODHEAD, Chairman of Council, in reviewing the financial situation said: "At the Annual Meeting last year I was in the happy position of being able to announce that the year 1953-54 had closed with a surplus of £50. At that time, however, I refrained from attempting to prophesy what would be the position presented by the Accounts for the year 1954-55, that is for the year which has just closed, for there were indications that our subscription income was falling. I was wise in doing so for, unfortunately, during the past year, losses by death and resignation have been heavy, and new members have not compensated for those losses. As compared with the year 1953-54, our subscription income fell by about £120. If our expenditure had remained steady, that loss would have resulted in a deficit on the year's working of roughly £70. Our expenditure in 1954-55, however, was increased by two non-recurring items, £26—the cost of the illuminated Address presented to Sir Frank Brown on his retirement, and £50 on the purchase of a recording machine. In the result, the total deficit amounted to about £135. In the past our expenditure on reporting proceedings of our meetings has been between £40 to £50 a year, and we hope that the acquisition of the recording machine will relieve us of this annual expenditure. The machine, which we purchased jointly with the Pakistan Society, has proved a success and this year we have incurred no expenditure on the reporting of meetings. I hope, therefore, that our expenditure this year will be less than in 1954-55, but once again I feel I dare not prophesy what will be the financial result of 1955-56. One thing, however, is clear. We need as many new members as possible to off-set the inevitable losses due to death and resignation, and that is why in the Annual Report the Council has expressed the hope that all members will do their best to secure additions to our membership roll. Every endeavour is being made to obtain new members but may I take this opportunity to make a special appeal to members present to-day to assist in this endeavour to expand our roll of members.

The Hospitality Account presents a more favourable picture, for receipts have fully covered expenditure. This favourable position is largely due to the generous donation of £50 received from Sir Cowasjee Jehangir. We are indeed grateful to him for his generous gift.

Mr. CHINNA DURAI proposed the adoption of the Accounts for 1954-55. The resolution was seconded by Professor H. B. Dunnicliff and was carried unanimously.

Mr. H. S. L. POLAK proposed that the co-optio[n] to the Council, during the year, of Miss E. Gedge and Mr. M. A. S. Dalal, be confirmed and that Lt.-Colonel Lord Birdwood, Sir Jeremy Raisman and Sir Henry Richardson, who retire by rotation, be re-elected to the Council. The name of Sir Harry Townend was proposed for election to the Council in the place of Sir John Tait who, due to pressure of work, did not desire his name to go forward for re-election. These resolutions were seconded by Mr. K. KEYMER and were carried with acclamation.

THE PRESIDENT'S ADDRESS

The business of the meeting being concluded, Sir Patrick Spens, the new President of the East India Association gave an address. Sir Patrick Spens said:

"It is now my duty, as your new President, to address you which I do not propose to do at any great length. However, there are some things which I take this opportunity of saying publicly. I do regard it as a very great honour to have been asked to succeed Lord Hailey as President of this Association. The position affords a great opportunity to any man who desires, and is interested in maintaining existing and promoting new contacts between the people of this country and the citizens of India, Pakistan and Burma. It is certainly an opportunity of which I propose to take such advantage as I can. There is, of course, no good pretending for one moment that my experience of persons, events and conditions East of Suez compares with that of Lord Hailey. My experience of these countries is much more limited, but this I do venture to say, even in the presence of my predecessor, that I can at least attempt to equal him in carrying out the absolutely laudable and desirable objects of this Association. His vast experience of the East is not to be compared with my two visits to the Indian sub-Continent, both of them approximately five years in extent, separated by far too long an interval.

My first visit to the East started in October, 1914, and ended in the summer of 1919. Then I went East as Adjutant of a British territorial unit which, after a few months in Lucknow, fought for rather more than three years in an Indian Brigade in Mesopotamia, and I ended that section of my visit to India on the Staff at Meerut. That experience made me very many friends, far too many of whom have passed on by now, in and among the defence forces. Many of them I have retained, and I very much appreciated the honour that was done me a few weeks ago when I was asked to attend the Annual Reunion of the Royal Gharwal Rifles Association. My second visit was very different indeed. I was sent out in 1943 to take the place of Sir Maurice Gwyer as Chief Justice

of India. The position afforded me the invaluable opportunity of visiting every province in India and Pakistan, and during the course of those four years as Chief Justice, I made a great number of friends in every walk of life, British, Indian and Pakistani, and indeed even from Burma, an invaluable experience to me. Moreover, I am lucky in this that I live in London and am a Member of Parliament, and those two facts have resulted in my knowledge of those from India, Pakistan and Burma who have been visiting these shores since the war. Very few of my old friends have gone through London without having to subject themselves to some sort of interview or entertainment with me and my family.

I cannot but confess that far and away the great bulk of my contacts with India to-day, and the great majority of those who come to see me when they come to this country, are lawyers. I am a lawyer and am very proud indeed to be one whatever the public may think of the law, and I am also very proud that this Association has asked an ex-judge to succeed Lord Hailey as its President. I know that you have had distinguished lawyers on your Committee and as Vice-Presidents, but I do not think you have ever had as President a lawyer before. If I am right, that is all the greater honour which I very much appreciate, and I appreciate it particularly because of all the contacts between this country and India, Pakistan and Burma, whether they come from the administrative services, trade and industry or from the defence forces, I believe the legal connexions have been the longest and deepest and I further believe that they are likely to remain after many other contacts may have failed.

One of the things that interested me most when I took up my position as Chief Justice was the steady, determined growth, during centuries of British rule in India, of the independent High Courts. There was a long interval between the foundation of the first independent High Court at Calcutta and the establishment of the High Court at Nagpur by Lord Linlithgow in very recent times. Those of you who know the history of that period in India will know how hard Sir Elijah Impey, the Chief Justice, had to fight to establish jurisdiction over members of the Executive, indeed, if my memory serves me right, I believe that when he returned to England the powerful members of the Executive had him impeached for what he had done. During that long period, throughout India and Pakistan, there arose these independent High Courts and Chief Courts in every province. Those of you who are interested in the value of the growth of these Courts as seen by Lord Linlithgow, may well be rewarded by looking up the speech he made on the opening of the High Court in Nagpur, which I found in a record of his speeches in the House of Commons Library, one of the greatest libraries in the world.

During the long period of British rule in India, the legal contacts were extraordinarily close and have become closer as time has passed, for, after all, the whole system of Anglo-Indian law to which India has succeeded is really based on British Common Law. It is perfectly true that local customs and local laws have their place in it, but the general basis of the system of law existing in India when I went out there in 1943, and which we handed over to India, Pakistan and Burma after 1947, is based on our British system of law. There are a multitude of enactments which are almost verbatim the same as those which we have in this country, but of far more value than actual enactments are the ideas of the administration of justice which we have passed on to all three great countries. The personal connexion was always kept very close, as at all times at least one-third of the judges of the High Courts were appointed by the Crown direct from barristers of England, Scotland, or Ireland and, right up to 1947, there were a considerable number of British lawyers practising at the High Court Bars throughout India.

From the beginning of this century there has been an increasing stream of young men from India, Pakistan and Burma, and more latterly young women, coming to the United Kingdom to be trained in law and to be called to the Bar in this country. Ninety-five per cent of them at least, return to their own countries to practise there. No country which has inherited a system of law and ideas of justice, and the way in which justice should be administered, has ever been able in history to cast it off except by some convulsive revolution. A great number of the legislative enactments may, of course, be gradually modified for political or other reasons. It is quite probable that changes may be made in the machinery of the administration of justice in those three countries; indeed, in India already some substantial and important changes have been made since I left; changes made with the all too laudable object of trying to make litigation cheaper and more available to the poorer people in their own areas. We were discussing the same idea in the House of Commons only last week: a highly laudable object although not so easy to attain either here or there. But of one thing I am profoundly certain and that is, the fundamental ideas of British justice, equality before the law and the right to trial before one is kept indefinitely in prison; these fundamental ideas have been implanted in in all those three countries and, whatever the changes, will always come to the surface. And so India, Pakistan and Burma join the very distinguished number of great countries which have as the basis of their legal foundation British common law; the oldest of them is, of course, the United States of America. There are differences that have been developed whenever Her Majesty's Privy Council has not been able to maintain the final say in promoting

unity in the general law. Such differences will develop, but the fundamentals of British justice, I believe, are a heritage which we have passed on, not only to such great countries in the West as the United States of America and Canada, but also to the great countries of the East such as India, Pakistan, and Burma.

Last night, at a reception given for the Commonwealth and Empire Legal Conference, an Indian delegate said to me that it was astounding how we had instilled into the rank and file of the population in India the realization of personal liberty and the determination of the individual to preserve it.

Two years after I came back from India, in 1950, I was asked by the Inns of Court Educational Committee whether I thought it was any good us continuing, at very considerable expense to the Inns of Court, to retain and pay lecturers and teachers in Hindu and Muslim Law. Coming fairly fresh from the two countries I advised the Committee that it would not be worth their while to continue these courses as I did not think the number of law students from India and Pakistan would justify the expense and accordingly they gave notice that in July 1954 those lectures would come to an end. In the spring of 1954 I was invited to a students' dance in Lincoln's Inn, where I was surrounded by young men and women from India and Pakistan who were furious and pointed out that my ideas had proved utterly wrong, that there were in fact more Indian and Pakistani law students studying here than there ever were before the war. After making inquiries I was satisfied that the advice I had given had been proved wrong and accordingly the Council of Legal Education altered their resolution and the studies in Hindu and Muslim law, as part of the curriculum for call to the Bar in this country, were continued. I asked, before speaking to you this afternoon, for the figures of the number of students from India, Pakistan, and Burma, at present studying law in England as compared with the years before the war and those figures are very interesting. In 1936, 103 entered at the Inns of Court; in 1937 the number was the same, but in 1938 it had dropped to 78. In the years immediately after the war, 1946, 1947, 1948, and 1949, the numbers were down but by 1952 they had risen to 104. They fell in 1953 to 92, but in 1954 102 law students were entered and you can say that now, in spite of everything that has happened, at least 100 students, both men and women, are coming over every year from India, Pakistan and Burma, to study at the Inns of Court for the purpose of being called to the Bar in this country. It is a very significant figure: whereas before there were definite advantages to be gained for the practitioner in India who had qualified at the English Bar, those advantages are nothing like so great to-day; they are more in Pakistan, and yet this steady stream continues.

In other ways the situation has changed. No longer are British barristers appointed to the Bench in India and Pakistan. It is significant however, and a matter for which I personally rejoice, that when the Chief Justiceship at Allahabad fell vacant recently, it was a British Judge, almost the last surviving British judge in India, Mr. Mootham, who was appointed by the Indian Government. Not only was it significant but it was a very satisfactory and gratifying indication of good will.

What I want to say to members of this Association is this, and I say it particularly as I believe the legal members are comparatively few as compared with the others, that whatever contacts and friendships can be maintained by all sorts of people, be they in the defence forces, in the administration or trade and industry, the links between British law and the legal systems of India, Pakistan, and Burma promise to be as close and enduring as any. Through these links we can not only maintain but increase the friendship between the citizens of the United Kingdom and the people of those three great countries. I wish to conclude by saying that not only do those countries welcome most of our lawyers, for it is not uncommon for barristers from this country to plead before the Courts both in Pakistan and India, but in addition these countries support the co-operative efforts such as are taking place at the present time as at this Commonwealth and Empire Legal Conference being held in London. They send their delegates to take part in our discussions and they are very welcome, and I am certain that this Association will do all it can to welcome any distinguished lawyers from India, Pakistan, or Burma.

The Late Sir Atul Chatterjee

By SIR FRANK BROWN, CIE

At the funeral of Sir Atul Chatterjee at Golders Green Crematorium on September 12th, the Association was represented by the Chairman of Council, Sir John Woodhead, and he has conveyed to Lady Chatterjee by letter the condolences of the Association. Sir Atul took up Membership of the East Indian Association in July, 1925, and after his retirement from the High Commissionship, was elected a Vice-Chairman (in 1935). Until his last illness he was regular in attendance at Council Meetings and his clear judgment and concise expression of it were of great value in planning the work of the Association. His helpfulness was the more appreciated as coming from an Indian with so distinguished a record of service for

his country, as also in the international sphere. The erection of India House in Aldwych was due in no small measure to his efforts and persuasion as High Commissioner. In this, as in his administration of the Office, he prepared the way for the representation in London of the Indian Union on its creation in 1947. His international work left enduring marks, more especially on the work and achievements of the International Labour Office.

The Objects and Policy of the East India Association

(INDIA, PAKISTAN, AND BURMA)

IN 1866, eight years after the assumption of the government of India by the Crown, the East India Association was formed with the object of "the promotion of the public interest and welfare of the inhabitants of India generally." This object was steadfastly pursued during the ensuing eighty-one years. The Independence of India and Pakistan attained in 1977, while modifying the original conception, has increased the need for strengthening the bonds of friendship and the importance of mutual understanding between the people of Britain and the inhabitants of the countries formerly comprising the India Empire—namely, India, Pakistan, the States, and Burma. The Association therefore is continuing its work, with the assistance of all those who are interested in the welfare and progress of these countries, by the methods which have proved so helpful in the past, namely:

1. By lectures on current questions affecting those countries and publication of the same.
2. By providing opportunities for the free discussion of important questions affecting India, Pakistan, the States, and Burma.
3. By promoting friendly contact between the peoples of these countries and of Britain through the medium of social and other gatherings.
4. Generally by the promulgation of reliable information regarding the countries named.

The Association is essentially non-official in character and has no connexion with any political party. It seeks to provide an open platform for the consideration of current problems relating to India, Pakistan, the States, and Burma. It welcomes as members all those who are interested in their welfare and progress.

Papers are read and discussed throughout the year, except in the months of August and September, Members are entitled to invite friends to these meetings.

Industrial Progress in Pakistan

COTTON

THE COTTON textile industry continued to make creditable progress. The installed capacity on 31.12.1954 was 1,316,312 spindles and 18,427 looms as against 792,898 spindles and 11,911 looms at the end of 1953, and 177,418 spindles and 4,824 looms in 1949. The number of spindles increased in 1954 by 523,414 or 66 per cent over the figures of 1953. The number of mills in operation also increased from 48 at the beginning of the year to 68 at the end of it. On 31.12.1954, 173,988 spindles and 2,747 looms were in the course of being installed. By the middle of 1955 the installed capacity would exceed 1.5 million spindles. At this rate of progress, the target of two million spindles, which is to be achieved by the middle of 1957, will be reached well ahead of schedule.

The year 1954 has gone down as a landmark in Pakistan's cotton textile industry inasmuch as in this year Pakistan achieved self-sufficiency in coarse and medium varieties—the varieties that can be produced with Pakistani cotton. The indigenous production of cotton cloth and yarn in 1954 was 482,521 bales as against 301,425 bales in 1953, an increase of 60 per cent. Pakistan requires about 50,000 bales of cloth of all varieties per month; the production at the end of 1954 was of the order of 53,000 bales per month.

Self-sufficiency having been achieved in coarse and medium varieties, the attention of industry has now been directed towards increasing the production of fine and superfine varieties of cloth. Government has arranged the import of adequate quantities of cotton from America under the Commodity Aid Programme for manufacture of fine and superfine cotton yarn and cloth. They have also arranged with the industry for a permanent reservation of 250,000 spindles for the manufacture of such yarn and cloth. Industry is also paying attention to processing of cloth by increasing dyeing and printing facilities within the country. Within a year or two, Pakistan will become almost self-sufficient in all the major varieties of cloth.

Industry is already looking round for openings outside Pakistan. Last June a mission of textile millowners visited Afghanistan to explore the possibilities of export to that country. The prospects of export to other countries are also being investigated. A small beginning has already been made by export of token quantities of yarn and cloth to the United Kingdom and Afghanistan.

The policy of Government to reserve a percentage of spindles for producing yarn required by handloom industry continues to operate to general satisfaction. Government has appointed a Fact Finding Committee to inquire into the problems of the handloom industry and to suggest measures for protecting and sustaining it. The Government of West Germany has, at the request of the Government of Pakistan, deputed a team of experts in the cotton textile industry to advise on the ways and means of raising the efficiency and productivity of the industry.

JUTE INDUSTRY

Jute industry has also made significant progress. The target of 6,000 looms, which was to be reached by the middle of 1957, is expected to be realized by the middle of 1955. The programme for expansion of this industry by the addition of another 1,500 looms is well under way. During the year 1954, Pakistan exported 11,000 tons of hessian and sacking, worth one and a half crores of rupees. With increased supplies of power, exports should record a many-fold increase during the present year. Private enterprise has played an outstanding part in the development of this industry, providing two thirds of the total capital of nearly seventeen crores of rupees. It has also provided the personnel, both managerial and technical, required to run this industry, which is vital to the economy and well-being of Pakistan.

SUGAR INDUSTRY

Sugar is one of those industries which offers valuable opportunities to investors in Pakistan. At present, out of a total requirement of 250,000 tons a year, only a third of our requirements are met from indigenous sources. We are now spending as much as six to seven crores of rupees annually in foreign exchange. The P.I.D.C. is giving the lead in establishing new factories in various parts of the country and attaching to these a 6,000 acre sugar-cane farm to ensure regular supplies of good quality cane at reasonable prices. Two P.I.D.C. sugar mills, with a total of 25,000 tons annual capacity, have just gone into production in the Thal area. Two others, with a total capacity of 35,000 tons a year, one in Charsadda in N.W.F.P. and the other in Rangpur in East Bengal, are expected to go into production by the end of next year. There is considerable scope for setting up additional sugar factories in East Bengal where canes can be grown to good advantage. The P.I.D.C. proposes to establish one more mill with 20,000 tons annual capacity in that province. There are also large possibilities in Sind where, as a first step, the P.I.D.C.

is engaged in establishing a seed multiplication farm under the Lower Sind Barrage near Tando Mohd. Khan. When the Bahawalpur and Bengal sugar mills and five projected sugar mills in Sind are established, Pakistan will be just self-sufficient in sugar at the present levels of consumption.

EDIBLE OILS AND VEGETABLE GHEE

There are a hundred factories in Pakistan engaged in producing edible oils from locally grown oil-bearing seeds like cotton, rape, mustard and sesamum. Vegetable ghee factories in West Pakistan with a total installed capacity of 25,000 tons have generally been working to less than half their capacity on account of consumer resistance. The main factor responsible for the high cost of production is the price of cotton seed in the country with little relationship with world prices. Steps have been taken by Government to ensure supplies of washed oil under the American Aid programme to our oil mills and hydrogenation factories at prices which will enable them to market their products at levels within the reach of the general consumer. The target of 50,000 tons of hydrogenated oil fixed by Government is likely to be reached in the next two or three years. Steps are being taken to increase availabilities of oil bearing seeds from within the country by increased production specially of cotton in West Pakistan and by the introduction and extension of ground nut cultivation in East Pakistan. The question of the better utilization of coconut which is available in such large numbers in raw state in East Bengal is also receiving attention. Private enterprise has valuable opportunities in developing the copra industry in the East Wing to its own and country's benefit.

REFRACTORIES AND CEMENT

In the field of refractories and cement, some tangible progress has been made. In addition to eight existing factories producing fifteen lakhs of fire-bricks against the capacity of thirty-six lakhs per year, two additional factories—one at Malakwal in the Punjab and the other at Landhi near Karachi are under development. Once they are fully organized, the requirements of the country for most of the refractories would be largely met from the indigenous sources. In order to bridge the gap between requirements of cement and present capacity, two factories are being established, one at Daudkhel in Thal and the other at Hyderabad in Sind with a total capacity of 350,000 tons of cement a year. The Hyderabad factory is expected to commence production in the third quarter of 1955

and the Daudkhel factory in January 1956. The Chattak factory in East Bengal is expected to increase production from its present 50,000 per year to 125,000 tons by the middle of 1956. Whilst the present programme will enable the country to meet its minimum requirements, there is considerable scope for expansion to meet the growing needs of the country and of neighbouring friendly countries who have begun to look to Pakistan for supply of this building material.

TANNING AND LEATHER INDUSTRY

The tanning and leather industry has made rapid progress. Except for very fine quality of leathers like patent, glacekid and gold and silver, we are more than self-sufficient. We have to-day 46 tanneries, some fully and some partially mechanized, with a total annual production capacity of 17 million pounds of soles and 17 million sq. ft. of uppers. Production of industrial types of leather is in the initial stages of development. We have also established adequate capacity to meet the entire demand of leather, rubber and canvas footwear and leather goods both required by Government and the public. Footwear production is of the order of 21 million pairs per annum. A promising feature of the development in the industry is the export market which is being steadily built up for fancy embroidered footwear. There has also been substantial progress in the rubber industry. To-day Pakistan is in a position to produce all its requirements of cycle tyres and tubes, solid tonga tyres and rubber goods of all varieties from large sheets to tiny toys.

HEAVY CHEMICAL INDUSTRY

Two caustic soda plants, one at Nowshera of 10 tons capacity and the other at Karnaphuli of 10 tons capacity have gone into production, making Pakistan self-sufficient, for the present, so far as her requirements of caustic soda for paper board, soap and other allied industries are concerned. In addition to one Sulphuric Acid 10 tons plant under private management at Karachi, two Sulphuric Acid plants have been sponsored by the P.I.D.C. The production of the 10 ton plant at Karnaphuli is largely earmarked for the paper mill, the balance being available for sale to the public in Bengal. The 20 tons Sulphuric Acid Plant in Lyallpur will convert a large part of its production into Superphosphate making some 6,000 tons of Superphosphate per year. The Chlorine from the Caustic Soda Plant at Nowshera is being utilized by the D.D.T. Plant at the same place where some 700 tons of 100 per cent D.D.T. per year are now under production. As is known UNICEF has

financed a third of the total of 26 million rupees spent on this project. A 50,000 tons Ammonium Sulphate plant is fast coming up at Daudkhel in Thal. It is expected that the factory would go into production in early 1956. Should need for increased fertilizer arise in the near future, the capacity of the Daudkhel plant could be easily doubled, in view of the provision made in this regard at the planning stage of the project. The plant which is estimated to cost 63 million rupees is being financed by FOA insofar as external costs are concerned. There is considerable scope for establishment of fertilizer factories in Sind and in Baluchistan on the gypsum, limestone and the Sui Gas available in such large abundance in these regions. Preliminary planning has already been undertaken by the P.I.D.C.

HEAVY ENGINEERING INDUSTRY

Private enterprise has continued to play its part in the development of the steel industry. Present capacity for production of bars, angles, channels etc., is estimated at 150,000 tons per year. Some of the plants have been largely modernized and compare favourably with those in advanced countries. The main bottleneck in utilizing the capacity to full extent has been the inadequacy of billets. Indigenous capacity is limited to some 20,000 tons. The balance of the requirements of billets has to be met by imports. Every effort is being made to arrange such imports to the maximum extent possible.

In the field of iron-ore smelting, Messrs. Demag of Germany conducted a survey over a wide range in West Pakistan and reported reasonably good prospects for iron and steel industry on Pakistan's own iron-ore. More detailed surveys and investigations soon followed, this time by Messrs. Krupps of Germany. The first phase of the scheme drawn up envisages the setting up of a plant with a production capacity of 50,000 tons of iron ingots at a cost of one hundred million rupees. The second phase of the scheme aims at production of 300,000 tons of steel ingots and 50,000 tons of pig iron costing an additional 160 million rupees. The first phase of the scheme is now under Government's consideration.

PETROLEUM AND NATURAL GAS

During 1954 production of crude oil in Pakistan reached an all-time record of one million seven hundred thousand barrels representing a five-fold increase over production in 1947. Search for oil has continued in both East and West Pakistan. Early this year a test well was spudded in near Sylhet. Two other wells, one at Karsal in the Salt Range and the

second at Uch, Bugti Tribal Territory of Baluchistan are to be spudded in within the next few weeks. Government are giving all encouragement to oil companies to intensify their efforts for finding oil in the country. Recently, Government have offered to enter into arrangements with certain oil companies on the basis of equal division of the net income between the Companies and the Government. These incentives in the shape of tax concessions which include the provision of depletion allowance have already attracted a well-known foreign company which has signed an agreement with Government for joint operation and production of oil. Government will contribute 25 per cent of the funds required and the Company 75 per cent till an aggregate of two hundred million Rupees has been reached. Negotiations are at very advanced stages with three other oil interests. It is expected that these negotiations will be successfully concluded in the next few weeks and intensive work for finding oil started by oil companies concerned before the close of 1955.

Development of Sui Gas field has progressed satisfactorily. So far six wells have been completed. The reserves as estimated at present amount to over three million million cubic feet. A reassessment of reserves is now in progress and it is expected that the new figure will be near about five million million cubic feet.

The scheme for bringing gas from Sui to Karachi via Sukkur and Hyderabad is under implementation. The pipeline is being laid according to schedule and it is expected that gas will be available for use in August 1955. Investigations for the handling and disposal of natural gas in Karachi, Sukkur and Hyderabad are under way. The initial rate of production will be 37 million cubic feet a day raising progressively in a few years' time to three times this quantity. Government has under consideration the question of taking Sui Gas north to Kot Addu and beyond in connexion with the expansion of capacity for generation of electricity. The report of the Italian consultants on this project is under Government's active consideration.

POWER

The power projects in East Pakistan have continued to make steady progress. The Diesel Stations at Sidhirganj, Khulna and Chittagong are all in partial production. It is expected that they will be in full production before the end of this year. The 30,000 kw steam station at Sidhirganj is expected to be commissioned early in 1957. As regards the Karnafuli Hydro-electric project, work is in progress and according to programme the first set of 40,000 kw will be commissioned by 1958.

In West Pakistan the Lyallpur Diesel Stations of 10,000 kw capacity is nearing completion. Four sets have already been erected and the

remaining two are now under erection. The station is expected to be commissioned in six months' time. Permission has also been given for the installation of a 6,000 kw set at Lyallpur at a cost of Rs. 5.4 million. The erection of 132 kv transmission line between Wah and Jhelum with a route length of 116 miles have been completed. In N.W.F.P., Dargai with an installed capacity of 20,000 kw has been put on commercial service. The 132 kv transmission line between Dargai and Wah has been temporarily energized at 66 kv. In Karachi, work on the 30,000 kw steam station is progressing satisfactorily. According to schedule the station should be in commission by the end of this year. Sind Government have just appointed a firm of consultants to examine their project of setting up a 15,000 kw station at Hyderabad. Work on the multi-purpose Warsak Project which will have an installed capacity of 160,000 kw is being continued under the guidance of a Canadian firm of consultants, who are now engaged in preparing detailed designs of the project. Preliminary survey has been nearly completed. This project is being financed from Canadian Aid entirely insofar as the foreign exchange is concerned and partially insofar as Rupee expenditure goes. It is expected that the first 40,000 kw set will be in operation by June, 1958.

The question of establishing a 100,000 kw power station at Kot Addu in the Punjab based on Sui Gas is receiving urgent attention of P.I.D.C. The report of Italian consultants has been received and preliminary arrangements taken in hand. Provision has been made in the budget for work to be done in this year. It is expected that the power station will be in operation by the end of 1957.

Government have had under consideration the question of an organization to be set up for the development of the electricity industry and for the operation of power undertakings. Government have decided that a statutory organization working on sound commercial lines should be established. Legislation is now on the anvil and it is expected that an Electricity Authority will be in operation before the end of the year.

SCIENTIFIC AND INDUSTRIAL RESEARCH

Right from the inception of Pakistan, the Government have been keenly conscious of the fact that a well co-ordinated organization of scientific research and industrial development is indissolubly linked with the stability, progress and welfare of the country. To take care of this vital sector of national activity, the Government set up the Department of Scientific and Industrial Research under the Ministry of Industries in 1949. As a result of the activities of this Department, the Pakistan Council of Scientific and Industrial Research was established early in

1953 as an autonomous body under the Societies' Act of 1860. The Research Council, which comprises leading scientists, industrialists and representatives of the Central, Provincial and State Governments under the Chairmanship of the Minister for Industries, has worked out a plan for the establishment of a Central Laboratory in Karachi and three Regional Laboratories in Dacca, Lahore and Peshawar to take care of industrial research problems specific to the various areas of the two wings of the country. The work of these laboratories will cover a wide range of fundamental and applied researches directed towards the utilization of the natural resources of the country to their best economic advantage. An important aspect of their programme of activities will relate to pilot plant investigations, for studying the economics and optimum working conditions of processes developed on a laboratory scale, in order to bring them to the stage of actual industrial development.

For promotion of the activities for the Research Organization, the Government funded 10 million Rupees last year to cover the first phase of the planning, construction and equipment of the four laboratories at an estimated cost of about 20 million Rupees, and towards the capital and recurring expenditure of nuclear units of these laboratories, of which the one in Karachi has already been functioning for over two years while the others are now being set up. Out of the funded amount, Rupees six million have been placed at the disposal of the Council for the year 1955-56. Alongside of these developments in the field of industrial research Government have established the Central Standards Laboratory in Karachi for the quality control of industrial raw materials and finished products under the Ministry of Industries and branch of it is being set up in East Pakistan.

On the initiation of an Atomic Energy Programme by the Department of Scientific and Industrial Research, which handles all matters relating to research and development at the official level, Government have constituted an Atomic Energy Committee to prepare a detailed scheme for the survey and assessment of radio-active minerals, work out a detailed plan for the establishment of an Institute of Atomic Energy in Pakistan, and make recommendations on all other matters connected with the utilization of atomic energy for peaceful purposes. To cover expenditure on the preliminary phase of the Atomic Energy Programme during the year 1955-56, Government have sanctioned a sum of 2.5 million Rupees. This is a small measure of the importance Government attach to this most vital project, and it is hoped that with the proffered assistance of friendly countries which are in the forefront of developments in the field of atomic energy, it will be possible for us to cover much lost ground in a sector of scientific activity.

The Magic Mountain*

By MICHAEL SULLIVAN

THERE ARE CERTAIN experiences that remain with us always, buried under the accumulation of daily affairs that crowds our lives. But every now and then they well up from the deep recesses of the mind; a glimpse of something familiar but forgotten, a sound, a chance remark—and with a feeling almost of physical uneasiness we live again through that experience. I have only to hear the sound of a single bell, struck once, to find myself lying in a Chinese temple at night, far up a mountain side in Szechwan, listening to the deep boom of the temple bell as some late-arriving pilgrim places her small offering before the image of Kuanyin. I hear again the chatter of these little old women as they shuffle from one image to another, and then when they have gone to bed and the temple is silent once more, the soft hush of the rain falling in the trees. I have been transported into a different world, one coloured by the Chinese belief that it is in mountains that cosmic and magical forces are most powerfully concentrated. The note of the bell is more than mere sound, it is the reverberation of some cosmic energy. The water dripping from the leaves is more than mere nourishment to the earth—it is the *yin* element seeking its home in the deep womb of the mountain. These things are so because the Chinese have always believed them to be so.

For to the Chinese all mountains are sacred, hallowed by a tradition that goes back centuries before the Buddhists and Taoists built their first temples on their slopes. They are sacred because since remote times the Chinese have held that the cosmic forces, the energy, harmony and ceaseless renewal of the Universe, are in some way made manifest in them. For in popular belief the mountain is the body of the cosmic being, the rocks its bones, the water the blood that gushes through its veins, the trees and grasses its hair, the clouds and mists the vapour of its breath—the cosmic breath (*ch'i*) or “cloud-breath” (*yün-ch'i*) which is the visible manifestation of the very essence of life. Perhaps the peasant making his occasional pilgrimage is only dimly aware of the power of the mountain. For him it is enough to sense the magic in the air, and to feel that he has somehow come for a short time closer to the mysterious heart of nature. To the Chinese poet, painter or philosopher, however, to wander in the mountains partakes of the nature of act of meditation, even of adoration. In the procession of the seasons, the rhythm of rain and sun, the endless movement of clouds, mist and water, he sees a manifestation of the rhythm of the universe itself. By climbing the hills and looking out over range

* Lecture delivered to the Universities' China Committee in London.

upon range of peaks he discovers man's true place in the scheme of things. When the sun first strikes the high, bare eastern slopes at dawn, while the cloud-filled hollows lie dark and hidden, he observes the workings of the cosmic dualism of *yang* and *yin*, which, forever interacting yet forever held in balance, set in motion the due process of nature.

India with her extremes of drought and rain, death and rebirth, tends to seek release from the harshness of the physical world in a world of philosophical abstraction, and if release from the intolerable burden of existence cannot be found, to invest the physical act with a metaphysical meaning. Indian thought thus inclines always towards the transcendental. The Chinese, on the other hand, living in a kinder environment, tend to seek Reality not in philosophical speculation but in the natural world. To know nature more intimately, therefore, is to come closer to an understanding of the Reality which is imminent in nature. Thus, ideally, the Chinese painter may spend years of his life wandering among the hills and streams so that this natural order, which is but a visible manifestation of the cosmic order, might reveal itself to him.

The sanctity of the mountains in ancient Chinese belief found expression in the sacrifices called *feng* and *shan*. The first-century text *Po-hu-t'ung* "Discussion in the White Tiger Hall," discusses these ceremonies at length and explains why the emperor on his accession must ascend T'ai-shan to offer the *feng*-sacrifice. "Why must [the sacrifice be offered] on Mount T'ai? It is the place where the ten thousand things originate and where [the *yin* and *yang*] alternate . . . Taking advantage of the height [of the mountain] the announcement is made to the high [Heaven, thus acting] in conformity with the latter's nature. Therefore by ascending the mountain and erecting on its top an altar for the *feng* sacrifice its height is increased; by descending [the mountain and erecting an altar] for the *shan* sacrifice at the base of [the peak of] *Liang-fu* its solidity is added to." It is not that the mountain is holy, as in the ancient Near East, by virtue of its being high and nearer to heaven and therefore a meeting-point between gods and men. It is the mountain itself that is sacred, "imbued with spiritual power." The sacrifice is not only offered on Mount T'ai, but also to Mount T'ai, as a peculiarly potent reservoir of the power of Nature itself.

So when in time the Buddhists came to build their temples on the slopes of these mountains, it was not this act that made the mountain sacred, but rather did the Chinese belief in the magic power of the mountains themselves invest the Buddhist temples with a deeper sanctity. To no Christian church, raising its spire over the roofs of some crowded Chinese city, could ever have accrued that magical potency which hangs about even the meanest hillside shrine.

Little record has survived of landscape painting in ancient China, but according to the *Li-tai ming-hua chi*, a general history of art written by Chang Yen-yuan in the mid-ninth century, the Chin Dynasty painter Tai Po executed a picture which from its title must have been an attempt to express these forces in terms of landscape painting. The very title *Ch'ao-yang ku-shen* [*feng-shui*] *t'u* is pregnant with metaphysical undertones. For *Ch'ao-yang*, according to the *Erh-ya*, means "the eastern side of a hill"—hence the face on which the sun (the *yang* element) first shines in the morning. It is where, according to the *Shih-ching* there grows the *wu-t'ung* tree, symbol of the sun. *Ku-shen*, on the other hand, simply reeks of *yin*, the passive female element. In *Tao-té-ching* Chapter VI we find the lines,

The Valley Spirit [*ku-shen*] never dies.
It is named the Mysterious Female.
And the Doorway of the Mysterious Female
Is the base from which Heaven and Earth sprang.
It is there within us all the while;
Draw upon it as you will, it never runs dry.

Here the sun, *yang* and male, is opposed to the water, *yin* the female, and as though its cosmological significance were not sufficiently underlined, the version of the title as given in the early T'ang history *Chen-kuan kung-ssu hua-lu* includes the term *feng-shui*, the geomantic science by which these forces of *yang* and *yin* in nature are estimated, allowed for or controlled.

More potent still than the *yin-yang* aspect of the mountains was the concept *ch'i*. Much—too much, perhaps—has been written about this mysterious entity, and Western writers on Chinese art are tending not only to fight shy of it themselves but to look askance at any one who is old-fashioned enough to discuss it. But if sentimentalizing about the spirit of nature in Chinese art is now out of fashion, it would be sheer perversity to pretend that the importance of this concept has been exaggerated. However bored we may be with the *ch'i* the fact remains that it is the quintessential concept in the Chinese attitude to nature and to landscape painting. In its metaphysical sense it is the vital energy in Nature which we may apprehend if our senses are rightly attuned to it. It is the source of life, of *yin* and *yang*. But unlike the *Tao* which is everything and nothing, everywhere and nowhere, the *ch'i* is a positive creative force. Like the famous *ch'i-yün*, the first of the Six Principles of Hsieh Ho (c. A.D. 500) concepts such as *sheng-ch'i*, "life breath," are used by early writers on art to describe how the painter has caught this

mysterious force in nature and transferred it by his inspiration to the landscape painting.

But *ch'i* is not merely a formless cosmic force. The term also means "breath" or "vapour" and it is in this more material sense that its connexion with the Magic Mountain is manifest. For the Taoist believes that the mists that gather in the valleys, the wisps of cloud that drift up the face of a precipice, are indeed the *ch'i* made visible, the exhalations, as it were, of the living mountain.

With the development of landscape painting, the artist was able to depict this living breath of Nature by means of the clouds that hide the foot of the mountain or ring its peaks. The cloud-encircled hill becomes a common convention in landscape painting from T'ang times onwards, and even in the Buddhist frescoes at Tunhuang (Cave 70) we find the *yün-ch'i*, cloud-vapour, depicted as actually issuing out of the side of a hill. Going even further back, the hill-censer of the Han Dynasty is a solid embodiment of this vapour-emitting mountain. It is not precisely known what function the *po-shan hsiang-lu* performed in Han ritual. The form of the censer is familiar—a little pyramid of peaks often surrounded by waves representing the Eastern Sea out of which rises the Blessed Isle of P'eng-lai. Behind each peak is a little opening, so that when the incense burns inside it, the smoke curls up through the holes. This is the cosmic mountain in miniature, wreathed in the *yün-ch'i* or *ch'ing yün* (felicitous clouds) which are its vital exhalations. When, about the year A.D. 400, Ku K'ai-chih wrote his essay on "Painting the Cloud Terrace Mountain," to which I shall refer again, he specifically included these magic clouds in his directions as to how he would go about depicting that ideal landscape.

But the magic mountain was not merely the creation of the Taoist imagination. In the popular mind it was indeed identified with unattainable P'eng-lai in the Eastern Sea, or K'un-lun far beyond the Western frontiers; but the people of Han China, who mixed fantasy with a down-to-earth realism, were not content to leave them there. They wanted them to play with. So they created them artificially in forms ranging from the *po-shan hsiang-lu*, a few inches high, to vast hunting-parks several hundred *li* in extent. These parks were in fact great artificial landscapes created out of the hills, streams and pools of a stretch of countryside near the capital. Ditches were enlarged into rivers, hills heaped up and clothed with trees, while from the centre of the artificial lakes were raised pyramidal islands in imitation of the three legendary "Isles of the Blest" in the Eastern Sea. Here is a part of the description of the imperial hunting park near Changan, contained in a *fu* rhapsody written by the Han poet and historian Pan Ku: "In the vicinity of the capital

to the West lie the imperial parks, the forbidden gardens, thickets, forests at the foot of mountains, lakes and pools, basins and marshes. They stretch as far as Shu (Szechwan) and Han, and are surrounded by a circular wall more than four hundred *li* in length. The separate palaces and buildings number thirty-six; magic streams and marvellous pools appear on every side. Within the park there are unicorns from Katigara (modern Tongkin), horses from Ferghana, rhinoceros from Huang-chih (?), birds from T'iao-chih (country of the Tadjiks?). Passing over the K'un-lun mountain, and crossing the sea, the varied species (of animals and plants) were brought there from countries as far distant as thirty thousand *li*." The view from the top of the observation tower is stupendous; "Before stretches the Lake T'ang-chung, behind, Lake T'ai-yeh. Their waves can be seen as high as those of the limitless sea, breaking against the rocks of the fairy shore, half-submerged in water. With a crash they hurl themselves against the fairy rocks, covering isles Ying-chiou and Fang-hu, while P'eng-lai rises between them. Then the magic grasses flourish in winter, supernatural trees thrust up in clumps. The rocks are precipitous, the cliffs towering, metals and rocks form high jutting peaks. There the Emperor (Han Wu Ti) raised two statues of immortals holding bowls to collect the dew (an element in the elixir); these statues he placed on two columns of bronze which rose far above the impurities of the dusty world." There, too, the Emperor held long discussions with Taoist practitioners, seeking the key to immortality. "Indeed," says Pan Ku, "that was truly a dwelling-place for immortals; it was no place for ordinary men such as we."

These hunting parks were stocked with all kinds of animals—tigers, panthers, elephants, deer, wild boars, hares, and game birds of every sort. In his *Hsi-ching fu*, *fu* of the Western Capital, Chang Heng (78–139) tells us that in preparation for the hunt the long grass was burnt off, ground levelled (for the imperial chariots), tree-trunks and brambles cleared away; nets were spread across every path, and a great circle of beaters, striking drums, begin to close in upon the game, gradually driving the vast horde of birds and animals towards the point where the Emperor and his entourage waited. The slaughter, as we might expect from such a procedure, was terrific. The hunt and subsequent division of the spoils was followed by a great entertainment. Jousting, clowns, dancing, juggling, sword-swallowing and fire-belching entertained the Emperor while he feasted. Wonderful streams and trees were made to appear as if by magic; artificial clouds and even snow darkened the sky, while from galleries above attendants produced the sound of thunder, "like the wrath of the Gods," by striking boulders together. Suddenly, by some Leonardesque device, a huge fairy mountain was made to appear.

"Upon its sides," writes Chang Heng, "bears and tigers climbed and fought one another; apes leaped about and scrambled among tall trees, strange quadrupeds appeared . . . Marvellous pictures suddenly were revealed; magicians swallowed swords and vomited fire, or caused dark clouds or fog to engulf the scene." The same author's *Nan-ching fu*, which describes the luxuriant scenery of the city and environs of Nanyang, southern capital of the emperor Kuang-Wu Ti (A.D. 25-58), catalogues in great details the music and delicious wines, dancing girls and feasting, marvellous birds and fishes, and the trees and plants which grew in great profusion in the park; ". . . these trees press their roots into the earth, and lift their trunks high into the air. Tigers, panthers and brown bears roam about in the thick forest, while various kinds of monkeys play in the tree-tops . . ."

After the hunt and the entertainment which followed, the Emperor would sometimes ascend one of the great towers which commanded this fabulous landscape there to shake off the dust and noise of the day and withdraw into solitary communion with nature, thus as it were purging himself of his recent orgy of slaughter and debauchery. Sau-ma Hsiang-ju (179-117 B.C.), whose *Tzu-hsü fu* and *Shang-lin fu* were to be the models for all later poems of this kind, described in the preface to the former poem how the King of Ch'u crowned his day by ascending the Terrace of the Summer Cloud and there sinking into a mystic trance. We may see the whole event as a kind of ritual act, whereby the warlike passions of king and courtiers were assuaged in the holocaust of the hunt; this accomplished, they turned to the celebration, which ended, dramatically and appropriately, by the final act in which the Emperor withdrew into contemplation of the fairy world which he had created.

Towards the end of the Han Dynasty a gradual change took place in the attitude to nature. The emergence of a new scholar class, the awakening of the poetic imagination, the confusion into which China was plunged in the third and fourth centuries—all these were factors in the growth of a new and more intimate romanticism, in which escape from the troubles of the age played no small part. Now, the hunting park becomes transformed into a fairy garden, a paradise where if you were quiet, and perhaps slightly drunk, you might stumble suddenly upon an immortal gathering magic herbs beside a pool. These gardens, like T'ao Ch'ien's "Peach Blossom Spring," provided the inspiration for many landscape painters down the centuries. They were not all creations of the imagination, however. The garden designed for the Liang Emperor Hsiao-Ti had, among other features, an artificial mountain (*po-ling shan*) intended as a dwelling-place for immortals, a grotto called the Seven Dragon Cave

(*Ch'i-lung hsüeh*), fish ponds and artificial waterways. The garden built by the multimillionaire Yang Kuang-kan outside Loyang was hardly less magnificent. Equally famous was the Golden Valley Garden (*Chin-ku yüan*) in Loyang, where the wealthy Shih Ch'ung dallied with his mistress Green Pearl in fantastic luxury until his assassination in the year 300. It was in the reign of Liang Wu-ti that the ideal of the scholar's secluded garden first became widely popular, beginning with that of Tung Chung-shu, which probably consisted of little more than a courtyard with trees, a pool, and shrubs and flowers in pots. The scholar and aristocrat Ku P'i-chiang (c. 350) had a garden in Soochow, the first of many in that famous city of gardens, and the poet T'ao Ch'ien retired whenever he had saved up enough to a quiet country cottage with a rustic garden of the simplest kind—a veritable *hortus conclusus* such as was to offer refuge and peace to the scholar and aristocrat of Medieval Europe.

Yet the Taoists knew that not all mountains were equally suitable for fairies and immortals. You might wander for weeks among the hills and never meet one. How then was one to know the likely places? Two things chiefly singled them out—the fact that the *ling-chih* grow on the hillsides; and the presence of *ch'üeh*.

Sure indication that the mountain harbours immortals and fairies is the presence of the rare and fabulous *chih*, or *ling-chih* (spirit fungus) which grows in hidden crevices high on its slopes. In modern Chinese, *ling-chih* is the name for two types of fungus. In ancient Chinese mythology it is not to be identified with any particular plant, but represents a large group of plants which, if properly gathered and prepared, will yield the drugs that confer immortality or magic powers. A wonderful account of the appearance, habitat and effects of many kinds of *chih* is given by the third century Taoist, alchemist and writer Ko Hung (c. 253-333), in his compendium *Pao-p'u tzu*. After listing a number of sacred mountains in China, the author states "In all of these mountains orthodox divinities are residing and there are, perhaps, terrestrial immortals." (His references to immortals are somewhat guarded. He tends to be rather on the defensive about them, telling many stories about them and vigorously attacking the cynics who say they do not exist; but he can never quite bring himself to say that he has actually met one.) "In all of them grows the *chih* plant, with which one can ward off weapons and great calamities." But, as he frequently states, the main value of the *chih* is as an elixir.

In certain cases the *chih* seems to be a genuine fungus. Ko Hung, Chapter XI, says that "the *wu chih* (five mushrooms) as well as cinnabar as paste, jade elixir, malachite, realgar orpiment, mica and brown hermatite may be taken singly." He lists also a number of other plants

good for immortality, such as the *fu-ling*, *ti-huang*, *mai-mien-tung*, *shih-wei*, and many others. According to his authority, there are five basic kinds of *chih*, all of which, in varying degrees, are efficacious. First there are the *shih-chih* (stone *chih*), which, he says, resemble in appearance a stone elephant; they grow on precipices, on arms of the sea, holy mountains and islands. They have a tail and four legs, and they shine in the dark. There are altogether one hundred and twenty kinds of stone *chih*. Secondly the *mu-chih* (wood *chih*), of which he says, "If the resin of the fir or *thuja* (*orientalis*) soaks in to the ground, it changes within a thousand years into *fu-ling*; when the *fu-ling* is ten thousand years old, small shoots like lotus blossoms grow on it. These shoots are called *mu-wei-hsi chih* . . . ;" he then mentions eleven other kinds of *mu-chih*. There are also one hundred and twenty kinds of *ts'ao-chih* (grass *chih*), "any one of which will bestow . . . long life of at least one to two thousand years, or as long as heaven and earth shall last." Fifth and last are the similar number of *chun-chih* (mushroom *chih*), which appear in any of the five colours. Having enumerated all these and described their appearance and qualities at length, Ko Hung gives instructions as to the days suitable for going *chih*-hunting, the particular direction of the compass from which the *chih* (which here takes on the character of a Snark) must be approached, how it should be plucked, gathered, and finally compounded into an elixir.

The *ch'üeh* was perhaps an even more important element in the Taosit landscape. According to Chou Dynasty ritual prescription, the palace of the ruler was marked by two towers, called *kuan* or *ch'üeh*, which stood to left and right of the main gateway. With the decline of Chou authority, this prerogative was abused to the extent that, by the Han Dynasty, *ch'üeh* pillars were widely used as marks of distinction before the houses of people of rank. They may be seen depicted on a large number of stone and clay reliefs of the Han period. They were also erected at the entrances to tombs, for the same purpose. As an example one may cite the stone piers of the tombs of Teng-feng-hsien, Honan, and the *ch'üeh* carved out of the living rock at the entrances to some of the cave tombs at Chiating in Szechwan.

However, in the popular imagination, the *ch'üeh* continued to signify the dwelling-place of a superior being. With the rise of the Taoist nature-cult in the Later Han, people came to see in any rock in a natural landscape that bore a resemblance to a *ch'üeh* the sign of the presence of a deity or spirit: for just as in ancient times stone or wooden *ch'üeh* had marked the dwelling of an earthly ruler, so now did the *ch'üeh*-shaped peak come to signify the dwelling of a ruler of the natural (i.e. spirit) world. Not only this, but the presence of *ch'üeh*-shaped rocks lent to the mountain itself a peculiarly magical quality. In the *Lu-shan chi-lüeh*, a description by

the famous monk Hui Yüan of the mountain in which he established his retreat, these natural *ch'üeh* are called *t'ier* (heavenly) *ch'üeh*, or *shen* (divine) *ch'üeh*; Shan Ch'ien-chih, in his *Tan-yang chi*, also refers to pairs of natural *ch'üeh* as *t'ien-ch'üeh*. The lop-sided, overhanging form of the *ch'üeh*-shaped peak of Six Dynasties painting is therefore derived ultimately from the stone or timber *ch'üeh*, which took a left-or-right-hand form according to its position flanking the entrance to palace or tomb. A left-*ch'üeh* was buttressed on the right, and vice versa.

Ku K'ai-chih, in his essay referred to above, makes the *ch'üeh* a focal point in his landscape. He specifically mentions a "left-hand *ch'üeh*," and at what may be the culminating point of his composition there stand "two slabs of stone in the form of left-and-right *ch'üeh*, which over them struts a lone phoenix." We find *ch'üeh*-shaped rocks depicted on Han reliefs from Szechwan, and on a lacquer plate from Lolang; in both cases these mountains with flat overhanging tops support fairies and immortals. They are depicted also in the small landscape panels decorating the canopy of the Tachibana shrine at Nara, and as the principal feature in the natural setting of the Filial Piety scenes engraved on the sides of a well-known stone sacophagus in the Nelson Gallery, Kansas City. When in course of time this convention became assimilated into the repertory of every landscape painter, its early magical associations came gradually to be forgotten.

But in the Han and Six Dynasties, the critical era in which the Chinese painter's attitude to Nature and the basic repertory of his art were first formulated, the magic mountain with all its rich associations was a reality—none more so than the Yün-t'ai-shan, The Cloud Terrace Mountain, the legendary abode of the great Han mystic and Taoist practitioner Chang Tao-ling. On its slopes he practised his austerities and tested his disciples, and from its overhanging terrace he finally took leave of them and flew off into the sky. *Pao-p'u-tzu* specifically mentions the Yün-t'ai-shan as one of the mountains "fit for the cultivation of oneself and for compounding the medicine of immortality." The fact that an alternate name for the Cloud Terrace was *T'ien-chu shan*, "Heaven Pillar Mountain," is significant. *T'ien-chu shan* was also a popular name for Mount Meru or Sumeru, the world's axis and centre of the Universe in Indian cosmology. It is symbolized in the design of the "TLV" type bronze mirrors of the Han Dynasty. These mirrors are a form of mandala, in which the Universe is set out about its axis—symbolized by the protruding central boss—about which are disposed various elements representing the four directions, China and the "four seas" and the outer regions of the barbarians. The earth is represented by the central square, the sky by the circular rim of the mirror itself, and at the same time *yang* and *yin*,

sun and moon are also symbolized. But it is the central boss, the world mountain, which is the focus of the whole design. In Chinese mythology, Meru was also identified with the K'un-lun, that great range known only through travellers' tales, which rose beyond the deserts at the western confines of the Empire. The K'un-lun, no doubt by virtue of its remoteness, was even in pre-Han times associated in the Chinese mind with fairies and immortals, it was also the realm of Hui-Wang Mu, Queen Mother of the West.

We need not try to disentangle the complex folklore woven about the mountain in Chinese thought, or to analyse Yün-t'ai-shan, K'un-lun, Meru as myths distinct from each other, each with its own source and history. The significant fact is not the variety of these myths, but their essential unity. For in Chinese eyes mountains had a peculiarly potent meaning. Whether looked at from the point of view of the metaphysician, the alchemist, the poet or painter, they were the living, breathing embodiment of the life-principle, of the *Tao*.

In a delightful essay written, it is believed, by the painter Tsung Ping in the fifth century, we find implicit the view that if the mountains are in fact so redolent of these cosmic forces, then is not meditation upon them really just as good as meditating upon the *Tao* itself? We cannot be sure that Tsung Ping actually wrote this essay, but it is so typical of the time both in style and in content, that it matters little who the author was. "The sages," he writes, "cherish the *Tao* within them, while at the same time they respond to the objective world; the virtuous purify their minds, while they appreciate represented forms"—in other words, the true sage knows both the ultimate and the relative Reality. "As to landscapes, they have both natural existence, and reach into the realms of the spirit. . . . So it is that one speaks," and here Tsung Ping very properly quotes Confucius, "of the pleasure taken by the virtuous and the wise in mountains and water." The virtuous follow after the *Tao* by spiritual insight, and the wise men take the same approach. Landscapes captivate the *Tao* by their forms and the virtuous also take pleasure in them. Is this not almost the same thing?" Does Tsung Ping mean by "captivate" that the *Tao* will be attracted to a particularly beautiful landscape, or to one especially redolent of the *ch'i*? I do not know. Most significant is his claim that the experience of the landscape painter, sensitive both to form and to the inner life of form, is no less profound than that of the mystic lost in meditation upon the *Tao* that is without form. Perhaps Tsung Ping had tried Taoist austerities without success; for he confesses "I am ashamed that I cannot concentrate my spirit and harmonize my body." He would hate to humiliate himself by attempting what he clearly cannot do, "so I draw pictures, spread colours, and build up

these cloud-capped ranges." And he goes on to explain how the forms of nature, the mountains, streams and clouds, which the painter sees, understands, and reproduces, are the outward, visible manifestations of the *Tao*. Because they are the visible symbols of the Ultimate Reality, they must be reproduced faithfully. The artist must express, not himself, but the life of the universe manifest in Nature. To do this faithfully constitutes the only kind of pictorial realism that Chinese painting traditionally recognizes.

When we realize the depth and intensity of the Chinese belief in the magic mountain, it is not surprising that it is a source of wonder and inspiration. On that famous day when he wrote the "Lan-t'ing Script," Wang Hsi-chih climbed up the slopes of Lu-shan with his friends who, like him, were scholars and calligraphers, and there found inspiration for one of the most moving compositions in Chinese literature. Through the centuries harassed officials and tired merchants have sought solace in cottages hidden in some mountain valley, where the roar of the waterfall and the chatter of the monkeys in time smooth away all worldly cares. They did not need to know why the mountains affected them in this way.

Countless generations of painters—from Tai Po in the fourth century who depicted the "Famous Mountains of Nine Princes" and Ku K'ai-chih, who painted the "Peak of the Five Old Men" in the Lu-shan group, down to our own day—have delighted in painting the mountains of China—not so much any particular peak, as their own experience accumulated through years of wandering among the hills. The little old peasant women who disturbed my sleep on Mount Omei knew nothing of the *Tao*; all they wanted was rebirth in the Western Paradise of Amithaba. They could have asked this from their own village temple, or by merely repeating the magic formula *o-mi-tô-fu* as they went about their daily business. But instead they chose to save up their pennies, and tramp many miles across the steaming Szechwan plain, for the sake of three or four days on the mountain, trotting from temple to temple, image to image, storing up enough merit to ensure ten times over their happy translation to the Sukhavati Paradise beyond the sunset. It was not merely the welcoming arms of Amithaba that awaited them, but Omei itself, heaving its great bulk up out of the plain, its stupendous cliff, the very embodiment of the *yang* element, bearing its breast to the rising sun.

The Bandung Conference from the Historical Point of View*

THERE ARE MANY people who are in a much better position than I to say something about the Bandung Conference—people who were actually there to see and to hear and to experience something of the atmosphere of this great and unprecedented event. Nevertheless, I have been asked to say a few words about the Conference, from the historical point of view, and since Indonesia was the host country and I am Indonesia's representative here in London—I accepted your invitation with pride and pleasure.

This year has certainly been a momentous one in the field of international negotiation and general rapprochement. I feel that before actually starting my topic for to-night we should give a little thought to that other conference on which the attention of the world has been recently focused. Geneva was hailed as the possible dawn of a new era—the prelude to better understanding and trust between the two great power blocs—and indeed, bearing in mind the projected visit of the Russian leaders to London next year, it would seem that the high hopes were to a large extent justified. On the other hand, the pattern of Geneva is an old established one—that of opposing forces trying to work out a *modus vivendi*—although in this instance the stakes have been higher than ever before. Bandung, however, was completely new. New not only in composition but in the fact that the powers concerned were not simply trying to settle some dispute but were rather trying to set before the rest of humanity the opinion of what was, until very recently, the underprivileged majority of the world. But, just as Geneva led to the possibility of further talks in London so, I am convinced, Bandung paved the way for the current meetings between representatives of the People's Republic of China and the United States of America. There is a new spirit of hope abroad to-day and I should like to think that we are at last learning the lesson that force can achieve nothing. How empty were the fruits of victory at the end of the second world war. Thousands of lives were lost, homes ruined and countries made desolate. It is true that the enemy was defeated—but the cost was terrible and the damage done almost irreparable. Are we at last beginning to see the strength of reason and the futility of war? Judging by recent events, it would seem that this is indeed the case. Earlier this week, during the first day of the

* Summary of an Address by His Excellency Professor Raden Supomo, Indonesian Ambassador in London, given at The Islamic Cultural Centre on Saturday, August 6th, 1955.

Conference of World Scientists, Earl Russell framed a resolution contending that nuclear weapons threaten the continued existence of civilized life and possibly even mankind, and urging the governments of the world to realize and to acknowledge publicly that their purposes cannot be furthered by world war. He also called for the immediate examination of the implications of recent scientific developments for humanity as a whole and the promotion of peaceful means for the settlement of all matters of international dispute. I believe that there is a new force at large in the world and it is the force of conciliation and I am firmly convinced that Bandung was primarily responsible for its manifestation. We must remember too that the Conference was very much in accordance with the spirit of Islam in general and with the Muslim tradition in Indonesia in particular. How fitting that this new atmosphere should pervade the international scene at a time so near to our feast of Id-ul Fitr, when groups of people assemble to seek and grant forgiveness and the young come to be blessed by their elders. How gratifying too for the 400,000,000 Muslims represented at Bandung.

It is not my purpose to give a day by day commentary on the events of Bandung—that has already been done over and over again by innumerable correspondents and you are doubtless well acquainted with the actual facts. I propose to quote a few of the many world wide opinions which were offered—or hurled—at the time of the Conference and from these to attempt to set Bandung in its correct historical context.

The other day at our Embassy we had two interesting comments from a visiting American professor who has spent a considerable time in Indonesia and is well acquainted with conditions there. He voiced the opinion of quite a number of people when he said that the history of the conference will have to be written later on, since its importance cannot possibly be assessed in the immediate future. How true this is has since been proven by subsequent events at Geneva and now the Sino-American talks. Who knows what may be the eventual outcome of Bandung. The second point mentioned by the professor has no real bearing on to-night's topic but you will understand my natural pride when I tell you that he assured us that the discipline and loyalty shown at Bandung were examples for any future international conference.

If we wish to see the correct historical significance of Bandung we must look back over the centuries. There we find the era of the great religions and the old civilizations when there was no national feeling as we understand it to-day. Later on came the time of European expansion and the subjugation of the peoples of Asia and Africa, but even then there was, on the whole, no really tangible evidence of organized national movements until the end of the last century. Then out of the smouldering

ruins came the spirit of freedom and the upward surge of nationalism but only with the conclusion of the second world war was this spirit given adequate impetus and sufficient force to make an impact on the world at large.

Then from the general trend came the particular movements and with them the conception of a new Asia comprised of young and independent states who should get together and plan their own future. It was out of past neglect that this impulse came—from the time when our affairs were discussed without reference to us and policies imposed from above without consultation or acknowledgement of our responsibility. Out of this neglect, I say, grew the dynamic force which made Bogor and Bandung possible.

What were the events directly preceding Bandung? It was in 1947 at New Delhi that the first great act of Asian solidarity took place with the convening of the Asian Relations Conference. This was followed in 1949—as President Soekarno said “historically speaking, only a moment ago”—by a conference of Asian and African nations, again in New Delhi, and it is here that we may see the roots of the Bandung Conference. To those with eyes to see, it was obvious that at long last Asia was on the march. In 1950 the Baguio Conference was held in the Philippines and a resolution passed stressing the need for frequent mutual consultation—through normal diplomatic channels—concerning problems of common interest in political, economic, social and cultural fields. At this time too, within the framework of the United Nations Organization, many countries had joined what is known as the Arab-Asian Group which, although having no formal constitution, was able to air many questions relating to its particular regions—questions which, otherwise, might have been passed over. Eventually, by the time the Colombo and Bogor Conferences were held last year, Indonesia had already evolved the idea of an Afro-Asian conference and seized the opportunity of putting her suggestion before the other Colombo Powers. Why?

Most of the countries involved had just found freedom. They were at last independent and consequently faced with all the problems of construction and reconstruction so familiar to the so called underdeveloped areas of the world. Indonesia, and others like her, had no time to get mixed up with one or other of the great power blocs—she just wanted to be left alone to get on with her work and put her house in order. To-day, however, it is not possible for any country in the world to turn its back upon its fellows. Isolation is a thing of the past and interdependence has come to stay. The world of 1955 is so small that some crisis in Europe or America can have immediate repercussions in the farthest outposts of Asia and similarly shortage and disaster in Asia or Africa can well bring

in its train want and ruin for the rest of the world. It was, therefore essential that the Asian and African countries should state their case plainly to the rest of the world and make it clear that, although willing to play their part in international affairs, they were not willing to be drawn into either sphere of influence and risk being plunged into the world's third and most ghastly war. Somehow they had to give vent to the feelings of millions of men and women who ask only the right to live and work in peace and independence without allying themselves to any great power bloc. Those who had for so long been "the voiceless ones in the world" could now give free expression to their hopes and fears. Our President summed up this attitude when he said: "We, the peoples of Asia and Africa, 1,400,000,000 strong, far more than half the human population of the world, we can mobilize what I have called the Moral Violence of Nations in favour of peace. We can demonstrate to the majority of the world which lives on other continents that we, the majority, are for peace, not for war, and that whatever strength we have will always be thrown on the side of peace."

The sincerity of this belief was very apparent and was commented on in the press. One newspaper wrote: "The most impressive feature of the conference is the widespread hope or belief that Asian non-resistance will prove more powerful than the dependence of the industrialized powers on military weapons." Other comments before the conference were forthcoming from many quarters of the globe. We were told that editors in the United States sensed the historic significance of the occasion, conceding that it would perhaps mark the beginning of a third force in the world which might well have the ultimate power to determine the course of world events. One newspaper stated—so rightly!—that "the point is not that this or that is wrong with the conference. It is that the conference is being held, that the principal rations of Asia and Africa are getting together to act on their own." Some went further and referred to Bandung as "one of the most striking phenomena of modern history." Another declared it to be unique in that the initiative came not from the older established countries, nor from the Communist spearhead, but from countries whose newly won independence is the most significant thing in the post war world. Nearer home as it were, a London newspaper declared the conference to be vague and added "it is—and probably will end by being inconclusive, but those are not the facts. The fact is that one half of the world's population has found a voice of a kind and that is one of the big things that have happened in our time." The publicity showered on Bandung before it began was mixed—but it did at least prove that the eyes of the world were focused on that particular point where 340 delegates were gathered to voice the opinions of 29 nations.

Before we actually look at some of the resolutions agreed upon by the representative countries I should like to make two points. The first is to emphasize that no attempt was made to "break away from or snipe at," the United Nations Organization. It is true that some criticisms were levelled and suggestions made but, as we all know, sound and constructive criticism can never hurt but will, rather, strengthen any worthwhile organization. The second point is that in framing the final resolutions we did not act on the democratic principle of a majority vote but rather on the democratic principle of respecting the opinions of all and honouring each other's point of view.

Now for the resolutions—Economic co-operation—now this is a very healthy sign, I think. Grateful as they are for outside assistance and the help of the United Nations, the countries of Asia and Africa realize that they must help themselves if they wish to find internal security and contribute to international stability. This is certainly an enormous step forward and one which was absolutely out of the question a few years ago. It is astounding that countries so recently under foreign rule should have shown so quickly such a mature approach to the interrelation of internal want and external co-operation.

Cultural co-operation—here again this phase has come with remarkable rapidity. Instead of each country turning its back upon its neighbour, we find a genuine desire to exchange ideas and promote cultural contacts all over the world. For generations men have talked about mutual understanding—this is the way to achieve it. Our peoples are not only physically hungry, they are all too often mentally starved. Now they look about them and eagerly seize every opportunity to learn, not only about their own history or how to make use of the overwhelming mass of scientific knowledge now within their grasp but also how to understand their neighbours and how to live with them in harmony and peace.

Human rights and self determination and problems of dependent peoples are subjects obviously dear to the hearts of all those attending the Bandung Conference. The resolutions passed were to be expected but they were couched in moderate terms and with constant reference to the Charter of the United Nations. They showed an adult approach to a very pressing problem tempered with a real and understandable sympathy for other less fortunate nations.

In appealing for the promotion of world peace and co-operation, the Bandung powers surely spoke for humanity. No one in his right senses can visualize our world in the throes of an atomic war. Is it for this that man has laboured for thousands of years? Are the wonders of our world to be snatched up in a puff of atomic smoke? Surely not. The Bandung declaration is, I think, unique in that it is aimed for the

greater part at those nations not taking part in the conference and underlines the fear of which I have already spoken—the fear of being dragged down into the inferno. The fear of being caught up in great cross currents of antagonism and finally obliterated.

No one can deny our right to state our case—we seek the same goal as other human beings, a life free from worry and outside interference. But, unlike the peoples of Europe or America, we have never before been able to voice our opinions; we have never been able to put reason against unreasoning fear and suspicion. As President Soekarno said: “The people of Asia and Africa wield little physical power. Even their economic strength is dispersed and slight. We cannot indulge in power politics. Diplomacy for us is not a matter of the big stick. Our statesmen, by and large, are not backed up with serried ranks of jet bombers.” We all know, however, that force has never succeeded in establishing peace and Bandung was for us, and for the world, a chance to prove that the voice of moderation may yet influence the trend of international affairs.

You will, I am sure, forgive me if I just refresh your memories by reading out the ten principles on the basis of which the Bandung powers hope to live as good neighbours with the rest of the world: (1) Respect for fundamental human rights and for the purposes and principles of the Charter of the United Nations. (2) Respect for the sovereignty and territorial integrity of all nations. (3) Recognition of the equality of all races and of the equality of all nations large and small. (4) Abstention from intervention or interference in the internal affairs of another country. (5) Respect for the right of each nation to defend itself singly or collectively in conformity with the Charter of the United Nations. (6a) Abstention from the use of arrangements of collective defence to serve the particular interests of any of the big powers. (6b) Abstention by any country from exerting pressures on other countries. (7) Refraining from acts or threats of aggression or the use of force against the territorial integrity or political independence of any country. (8) Settlement of all international disputes by peaceful means such as negotiations, conciliation, arbitration or judicial settlement as well as other peaceful means of the parties' own choice, in conformity with the Charter of the United Nations. (9) Promotion of mutual interests and co-operation. (10) Respect for justice and international obligations.

The Asian and African Conference declares its conviction that friendly co-operation in accordance with these principles would effectively contribute to the maintenance and promotion of international peace and security, while co-operation in the economic, social and cultural fields would help bring about the common prosperity and well-being of all.

Before the Conference was under way one commentator said: "If Bandung faithfully sticks to its agenda and upholds its objectives of equal rights and self determination, it can do good." Well, Bandung upheld its objectives and we are already witnessing the good that it has achieved.

Let us turn for a moment to some of the comments proffered at the conclusion of the Conference. It was with a faint air of surprise that some pronounced—I quote—"the experiment a success" and indeed it seemed that most of the watching world was astounded by the moderate tone of the proceedings. One of the most interesting comments was as follows: "The concept of Asia is a European concept. Asia is essentially the non-Europe of the world's main land mass and if Asia had any meaning to those gathered in Bandung, it was in their common experience of European expansion. Just as that era has come to an end, so one may expect the concept of Asia to break up; a paradox might well be that Asia's first exclusive conference was the beginning of the end of Asia." There is much truth in this comment, but I should like to make one remark. It should be remembered that there is a common social and spiritual background for the feeling of Asian nationalism; for the feeling against colonialism; for the feeling against foreign pressure in general. If ever this concept of Asia is to disappear it should be only in the merging of Europe and Asia into the concept of one united world. It has also been said that the months ahead would determine the effects of the conference and that the real work lay ahead of us. But whatever the future may hold, nothing will alter the fact that this conference may indeed have been "the turning point in the long post war struggle in the Far East." President Tito went one step further saying, "The number of Asiatic and African countries participating in the Conference and the huge interest in the Conference in Asia and Africa show that a cross roads of history has been reached in the sense that those peoples are determined to decide their own fate as far as possible."

To me, however, there were two other striking features worthy of comment. One was the extreme frankness with which delegates spoke. This went above the mere bandying about of slogans and the repetition of meaningless phrases. The delegates stated their views strongly and frankly—on the whole with remarkable restraint when one considers the divergence of opinion, nationality and religious feeling represented there—and were not afraid to voice their innermost thoughts. It was not an anti-western gathering, neither did it deteriorate into an anti-colonial demonstration. If it was anti-anything, it was anti-war. The men who were met together there were determined to clear the air and to have their say, afraid of offending no one.

The other point of great significance is that the conference emerged as the vehicle for possible negotiations between the two power blocs, and I firmly believe that we are beginning to see the proof of this. It is truly amazing that countries emerging so recently from the obscurity of centuries should so soon be in a position to offer themselves as mediators in a major international issue. Dignity and sanity are two of the adjectives which have been applied to Bandung and they are the two qualities which are all too often lacking in international discussions.

Bandung was of enormous significance for innumerable reasons. The voiceless ones of the world found utterance—the conference marked “the arrival of Asia and the emergence of Africa from its legendary oblivion”—the agreements were not so important as the fact that Asia and Africa had attempted to find a common voice—and far away in Florence the Roman Catholic Mayor of that city based his approach to peace this year on what he called “the lesson of Bandung.”

Quoting the Koran, Dr. Fadhl Jamali—leader of the Iraqi delegation—said “God will not change the condition of a people until they change from within themselves.” These words hold great significance for us, for if ever men tried to change the emphasis from force to reason, from destruction to understanding, and from war to peace, it was surely at Bandung.

In conclusion, I would draw your attention to one or two points which, to my mind, made Bandung of great historical moment. For the first time the peoples of Asia and Africa have been able to reveal their personalities as independent nations and give expression to their national consciousness. For the first time they were deciding their own policies and moulding their own future. No longer merely on the receiving end of other people's plans; no longer mere pawns in a game, they were able to formulate their own ideas freely and independently. They met together in equality and on their own soil.

Before Bandung, many had struggled alone, unaided and often unnoticed, fighting first for independence and then for survival. Now it was clear that these hitherto disregarded peoples were no longer alone; that their struggles were not isolated and erratic outbursts of discontent but, rather, fitted into a world wide pattern. Moreover, the delegates at Bandung knew that the attention of the world was on them—not only the old established powers were watching, but those countries still striving for independence had anxious eyes fixed on them, hanging on their decisions, noting their progress, taking courage from their success or losing heart over their failure. They knew that independence alone is not enough, that sound and rapid development must follow.

I believe that we have at last shown that we will no longer have the will of others imposed on us. The world can no longer talk about us, without us. We know our own countries, our neighbours and our part of the world better than any outsider can. And because we know the temperament of our people, we are determined to settle our own affairs and live by the rule of non-violence.

We have proved that the will, the solidarity and the determination of our peoples are as powerful as any material forces.

Bandung stands out as the crystallization of Asian and African nationalism; the first peak of our development as responsible states. The past is over. We have achieved our first objective and we now turn to face the future determined to play our part in world affairs with strength and determination, without violence or fear, loyal always to our people, to each other and to humanity.



Tunku Abdul Rahman, Alliance Leader and Chief Minister in the New Legislative Assembly, Kuala Lumpur, Malaya. The Alliance won 51 of 52 seats in the election. The Alliance is made up of the United Malays National Organisation, the Malayan Chinese Association and the Malayan Indian Congress.

The Future of the Malayan Rubber Industry

MALAYAN SELF-GOVERNMENT is now coming into view. Its principal economic foundation will necessarily be the natural rubber industry. Within the next 10-15 years there is in fact no practical possibility of changing the present basis of the Malayan economy, though there may be much progress in diversifying it on a comparatively minor scale.

Natural rubber has a history of violent price fluctuations, which on balance have worked against the producer much more often than in his favour. Over the twenty-five years ended in 1953 Malayan rubber companies domiciled in the United Kingdom paid an average dividend of just over 3 per cent on their issued capital—a return on a highly speculative enterprise so derisory that it is often disbelieved. It has been among the most sensitive of all commodities to economic depression. It has generally been and, with some important qualifications, is, dealt in a free world market. Since the second world war it has had a major competitor in synthetic rubber, which has been developed and produced by its largest consumer, using the resources of the state, and impelled by strategic as well as commercial considerations. Qualitatively speaking synthetic rubber is now competitive with natural over the whole field of use, and in certain specialized uses it is markedly superior. It is in a phase of vigorous technical progress, some indication of which is given by the fact that three important British undertakings have announced plans for manufacturing it in limited quantities, in order that they may not fall too far behind in technology.

Natural rubber is, then, by no means either a firm or a foolproof foundation for a young nation's aspirations, which are always expensive. Indonesia has proved that already. Yet, with the help which the country's second industry, tin, will certainly afford, it is the only one. Therefore, the wiser the policy of this and future Malayan Governments towards the industry, the more likely it will be to be able to carry the weight of the national aspirations. The Federation Government has appointed a Fact-finding Mission, under Sir Francis Mudie, whose report is expected in the autumn. The Mission's brief is to investigate the competitive position of the industry in the Federation, with particular regard to taxation in relation to the cost of production, the maintenance and attraction of capital, replanting, smallholders' rubber and unemployment in the event of a recession in price. The heads of this brief represent some of the principal ways in which Government policy affects the industry.

Others which will have their effect on its future are labour policy, policy towards companies domiciled in the United Kingdom, and policy as regards nationalization. The object of this paper is not to seek to anticipate the Mission's conclusions, which would be a fruitless undertaking, but to try to establish certain broad and general lines of thought about the future of the industry against which they can in due course be viewed.

We therefore ask: (1) What is the economic prospect before the industry? and (2) What lines of policy does this prospect enjoin upon the present and future Malayan administrations?

THE ECONOMIC PROSPECT

Prophesying about the future of rubber is foolish but there are always some fools left to undertake it. There is a current feeling both in the natural and synthetic industries that on the basis of present production facilities there may be a shortage of all kinds of rubber by about 1960. Such a feeling is based partly upon a projection of the previous history of rubber usage, which has approximately doubled itself in every decade, and partly upon assumptions about future economic activity which are as speculative as is the general assumption of a free world of continuously expanding economies. Speculative though they are, they cannot at present be improved upon.

More convincing than the projection of figures is the growth of uses for rubber. Rubber, like plastics, is of the essence of the age of science. It would not be stupid to call rubber the most up-to-date and most versatile of all materials. It ranges from great hardness to extreme plasticity; it can be made to insulate or conduct electricity; it absorbs shock and reduces noise in a way in which no other material can; it is comparatively simple to mould and work. Modern transportation depends on it, and in this field alone, no limit to its large scale applications is in sight. If science and engineering continue to advance there is every reason to foresee a continuing expansion in the uses of rubber.

While the long-term trend of rubber usage has thus been steeply and steadily upward it has generally been somewhat more than matched by the increase of production. Production surpluses have been more common than deficits in rubber history, and the story of the attempts made before the second world war to deal with them is told in our paper "A Factual Background to the Study of the Rubber Industry in Malaya." Since the war the tendency has continued, except during the Korean stockpiling frenzy, and, at least until very recently, it was generally felt

that it was likely to continue during the next few years, though the surpluses were expected to be modest. At the present time, synthetic production in America has been cut back rather more than had been generally anticipated, the usage of natural in that country has risen from about one-third to just under one-half of total usage, and current production appears to be if anything somewhat in deficit.

What most concerns natural in any event is its share of the total market. As to this, the omens appear favourable, upon the all-important understanding that natural shall remain, as at present, competitive in price with synthetic. Natural's recently increased share in the American market though no doubt welcome to the State Department, has not been brought about solely for political reasons. From this point of view there is little margin for increase on the present level of about 1/8d. per pound for first grade Ribbed Smoked Sheets in London. It is true that synthetic is still subsidized, not directly, but in the sense that as a state enterprise it is relieved of taxation and of the necessity to remunerate and amortize the very large capital used to set up the production facilities. There is, therefore, a prima facie expectation that the synthetic price may rise when, as is the American Government's present intention, the industry is sold to private undertakings in the spring of 1955. This is a difficult and, at present, rather an unsearchable question. Costs of production at the various synthetic facilities now on offer to private industry vary very widely indeed. The process of oil-extension of synthetic, successful in certain uses, reduces the price. Research is tireless. It may well be that the greater commercial acumen of private, as contrasted with state, enterprise will, after a little if not at once, succeed in absorbing the new oncosts and in offering synthetic at a price equal to or even lower than the present. Certainly it would be imprudent to assume that the price of synthetic, if indeed the facilities are eventually disposed of to private bidders in accordance with present arrangements (which for various reasons is not yet certain), will rise by much or for long.

Unfortunately the recent price level, so healthy from the point view of sustaining the usage of natural, is insufficient to provide the Malayan Government with the revenues it needs and would like to finance the Emergency and its bold and desirable measures of social progress. It is insufficient to allow to many producers either a satisfactory return on their investments, or funds for replanting on the scale required, or the opportunity of raising fresh capital. It is insufficient to allow labour to regain the wage levels even of 1953, which themselves had been considerably reduced.

Here is the dilemma with which the present and future Malayan administrations have to grapple.

In such circumstances a Government can seek generally either: (a) to obtain by political means an artificially high and preferably an artificially stabilized price for its staple produce, or (b) to encourage the most efficient production of its staple at its economic price, relying on this policy to show the best results in the end.

Of the first course it may broadly be said that all countries, from the United States to the Iron Curtain, do it when they can. Wheat, cotton, rice and other commodities offer examples of it in action. Before the second world war the Malayan and international rubber restriction schemes aimed at this end. Since the war, the advent of synthetic on a large scale has altered the situation, and, in place of restriction, the talk has been of a buffer stock, designed to stabilize the price level of a notoriously up and down commodity. Buffer stock proposals have had governmental support in Malaya and Indonesia and but for the opposition of the United States might well have materialized. This opposition has been the end of them, at least for the present.

A stable price generally means to a producer a price fixed at a level which the consumer regards as much too high. If the situation is such that the consumer is helpless and must pay up with what grace he may such an arrangement may, at least in the short term, considerably benefit the producer. If, as in the present case, the consumer can replace the product itself with a substitute which he can manufacture in virtually unlimited quantities at a lower price, then a price so "stabilized" is very unlikely to do the producer any good. United States opposition in this instance, therefore, may be regarded as having been in the best interests of Malaya.

Political arrangements for price fixing and maintenance may suit a producer with the whip hand for a time. The current story of wheat, among many others, shows that they are unlikely to do even that all the time. Malaya has not and is unlikely to have the whip hand, in this sense. It would seem, therefore, that future administrations would be wise not to dally with the idea of international commodity schemes for rubber, but instead to pursue effectively the real economic advantage which they possess. This advantage is that natural rubber, produced by methods inherently simple and cheap, ought always on the face of it to be more than competitive with synthetic, produced in plants which are costly.

The effective pursuit of this economic advantage, which is real and ought to be invaluable, involves questions of government policy towards the industry in respect of taxation, replanting, the structure and ownership of the industry, and labour and wages.

TAXATION

A Government with a Communist war to fight and a modern nation to build must have money. An industry fighting a first-class competitor on the largest scale backed to the hilt by American power and skill, and doing so under semi-war conditions, must not be enfeebled by excessive taxation. Since this is Malaya's staple industry, future administrations will only succeed if they achieve the proper balance here. How is the balance struck at present?

The Mudie Report will no doubt show the answer in detail. Meanwhile it must be noted that the complex of taxation imposed upon a rubber producing company has few rivals for completeness elsewhere in the world. It is compounded of elements whose function is to strike impartially at profit or loss and others which come into action if there should be profits. It is a comprehensive blending of the traditional with the most up-to-date techniques of fiscal extraction. A producing company domiciled in the United Kingdom (and such are the leaders of the industry) pays Quit Rent to Government upon its estates, which has recently been steeply increased in most areas. Upon its crop it pays Export Duty and Replanting Cesses (some of which are returnable) under four separate heads, and irrespectively of whether the crop is sold at a profit. Upon its profit it pays United Kingdom and Malayan income tax and United Kingdom profit tax. Upon United Kingdom income tax it is allowed Double Taxation Relief, which means that it pays no more under this head than it would in any case pay in United Kingdom taxation; but this relief does not extend to Malayan export duty. Upon the total of its earnings such a company will have been paying away in taxation in recent years 75-80 per cent annually, and somewhat less to-day since the burden of the sliding scale Export Duty has eased with the falling price. In addition it will have incurred heavy outlays for direct defence expenditure, on top of the substantial but incalculable losses arising indirectly from the Emergency, and for maternity benefits, medical treatment, free accommodation, contributions to a compulsory provident fund, etc.

By comparison with other producers of synthetic or natural (there is no Export Duty at present in Indonesia) and by reference to the replanting situation (which will shortly be discussed) it looks as if the balance at present is tipped too far against the Malayan producer for Malay's future well being).

It is a question of balance, and future administrations will, we believe, be wise if they look at it from that point of view. Drastic cuts in social progress (which involves heavy public expenditure) would be as foolish

as an overbearing and vindictive attitude towards the producer. Adjustments will have to be made either way at the margin and should not be dismissed as ineffectual because they are not immoderate. The producer's competitive position, particularly as regards synthetic, must be the gauge, and the safest indicator is the level of replanting. If this gauge is not heeded, and excessive taxation is imposed, the main source of public revenue will run dry and real social expenditure* will be cut more viciously than by any departmental axe. The present level of taxation is excessive, and must be reduced if producers are to replant to the extent required. In general the provision of loans for replanting will not be an adequate solution unless they are long term loans free of interest, since producers will not be able to afford them.

REPLANTING

It is impossible to propound any clear-cut figure for the economic life of a rubber tree. Generally it will lie within the limits of 30 to 45 years. If a rubber plantation is not to cease functioning abruptly when its trees are too old it must be continually replaced, and ideally this will go on in regular annual instalments so that the crop will be approximately maintained. A generally agreed figure in connexion with the proportion of the planted acreage which should properly be replaced each year is $3\frac{1}{2}$ per cent of planted acreage. A replanting normally takes from 5-7 years to reach maturity and at present costs an estate £70 to £100 per acre.

Owing to the vast improvement in planting materials, replanting not only replaces obsolescent stock, but greatly increases efficiency and reduces the cost of production. This is so because a modern replant should yield about 1,200 lbs. per acre when tapped against perhaps 400 lbs. per acre from unselected seedling rubber. Replanting with high-yielding stock is thus the most powerful competitive weapon in the natural producer's hands.

Recognition of this fact is widespread, and some of the loudest talk about replanting at present falls from those who have the shortest experience of its problems, or who have most thoroughly neglected it in the past. Some producers began replanting on a commercial scale in the thirties, and their experience is the soundest guide. It shows very clearly that whatever else it may be replanting is no present panacea. It offers nothing for five to ten years but heavy expenditure and reduced crop. If a replant is not adequately and often expensively maintained throughout

* Some indication of the scale of estate expenditure on housing alone was given in the Federation Labour Department's monthly report for July 1954, in which it is revealed that estates have spent over Straits \$30 million on housing in the last three and a half years.

its immaturity everything spent on it may be lost. The financial commitment to maturity carried by a producer who is replacing anything like 3½ per cent of his planted acreage annually is of the gravest kind, and may easily outrun his disposable resources at any time. If the problems of estate replanting are formidable, the problems of large scale smallholder replantings are gigantic.

The most regarded view at present is that now is the time for a widespread replanting campaign, which will serve not only to mitigate the prospective moderate production surpluses between now and 1960, but thereafter will enable the industry more effectively to meet the increased demand at lower costs. The considerations just set out must be borne in mind when this view is studied, and will go some way to offset its attractive simplicity. Notwithstanding them, it is true that any fiscal measures which can be devised to help and encourage the producer to replant are likely to be in the best interests of the Malayan nation.

The scale on which replanting has already taken place is considerable though not adequate. There were about three and a half million acres planted to rubber in Malaya at the end of 1952, of which about 630,000 acres were under high-yielding stock. About 400,000 acres have been replanted. The annual rate of estate replanting has, however, recently been falling, under the influence of high taxation, low prices and Emergency conditions. It fell from 58,000 acres in 1951 to 51,000 in 1952 and to 35,000 (estimated) last year. Conversely, since the inception of the Federation Government's replanting scheme for smallholders' replanted acreage has increased from a negligible figure in 1951 to 20,000 acres in 1952, with 47,000 acres approved for 1953. This programme was launched with the ambitious target of 500,000 acres, and it is so far well behind schedule and meeting with many difficulties. It is an important and necessary element in the general picture of the industry's future, but whether the present grant of \$400 per acre will prove to be the right figure, and whether there will be adequate maintainance to maturity are questions not yet solved. The decline in the annual rate of estate replanting is sinister, and indicates the absolute necessity of doing something to redress the balance spoken of above in favour of the producer without loss of time.

STRUCTURE AND OWNERSHIP

There are three directions (all of them converging) in which future self governing Malayan administrations and political parties may feel tempted to alter the existing structure of their rubber industry. They may seek to raise the smallholder to a position of dominance. They

may try to compel the United Kingdom domiciled company to migrate to Malaya, and perhaps to make over the greater part of its capital into Malayan hands. Finally, they may wish to nationalize the industry.

Historically the smallholder has never dominated the Malayan industry, but under Dutch rule he was given a very important place in Indonesia.* This fact, and the argument that rubber production is basically simple and cheap and can be further cheapened by eliminating overheads, may give a specious attraction to such a policy. It is true that the smallholder's rubber is more productive, more enduring and the discount on his produce less than is sometimes stated and believed. It is not, however, true that to concentrate chiefly upon smallholder production offers the best, or indeed any, chance of improving the technical quality of natural rubber so as to compete in future with improved synthetics. However Draconian the measures used there is no likelihood of setting up a central manufacturing organization for smallholders which would have any prospect of competing successfully with estates in this respect. Smallholders themselves would certainly prove less amenable to Government discipline than joint stock companies, and the very valuable and extensive measures of social advance which the European owned estates are all the time taking and improving would be endangered.

Malayan politicians may well find themselves attracted by a policy of encouraging or compelling companies domiciled in the United Kingdom to shift their domicile to Malaya. Whence, they may ask, should so important a section of Malaya's primary industry be directed if not from Malaya herself? Why, in the present climate of opinion, should dividends earned from Malaya's trees be paid away to stockholders beyond the seas, even though those trees have been planted and tended with European capital?

Such questions, though perhaps natural and inevitable, conceal dangers for Malaya. We think it unlikely that a policy of insisting on Malayan domicile would on balance benefit Malaya. In the process of competition with synthetics, which now and in future constitutes the life of the industry, London is not an irrelevant excrescence but one of the principal command posts. Kuala Lumpur will certainly be in better shape to compete successfully against Akron and Washington with the help of London than without it. The effect of removing a direct British interest in the industry is also worth pondering. It is likely that the British synthetic industry in such circumstances might become a far more formidable competitor than it is at present. Similarly, restrictions on the movement of capital or revenue remittances out of the country, tempting as they may be in

*Indonesian smallholder were encouraged to plant under the Stevenson Scheme. Later, however, under the Rubber Regulation Scheme, their treatment by the Dutch authorities was extremely harsh.

times of financial stringency, would be as gravely harmful to a self-governing Malaya as they are at present to Indonesia.

British-owned firms should, however, lead the field in the training and promotion of Malaysians in all grades of management and administration, as they already do in social, welfare and educational measures for labour. There is a necessity for more rapid advance in this department than has yet been achieved, but the emphasis must be on careful selection and thorough preparation, since Malaya cannot afford any deterioration in the standard of leadership which has been built up by Europeans in the industry. Haste in this matter will lead to waste on a scale which the country cannot tolerate.

Of the nationalization of the industry it may be said confidently, simply and shortly that it would be disastrous. The future is a future of incessant competition against synthetic and the weapons of survival are improved quality and lower costs. Nowhere, in much more advanced communities, has the nationalization of commodity production improved quality and lowered costs.

LABOUR

The industry's most valuable heritage will probably be less valued in Malayan political circles than it is certainly envied elsewhere. This is a labour force, on the whole staunch and reasonably hardworking, which accepts the principle that the level of wages must depend in large measure upon what can be got for the product. This is the tradition of the industry, and under its influence the workers have in recent years accepted successive wage cuts, to the great benefit of themselves and Malaya, since the alternative would have been unemployment. Indeed the good sense and grasp of realities of Malayan labour has been as remarkable as its fortitude. The temptation for Malayan politicians to undermine this good sense will be strong, but it will be of great importance to resist it. Flexibility in wage rates constitutes the most powerful of all defensive weapons in the hands of the producer of a competitive commodity. The belief that the interests of the workers are furthered by eliminating the flexibility is an illusion.

The future of labour relations in the industry is bound up with the development of the trade union movement. The trade unions are already an effective negotiating body, the level of wages being determined by negotiations between their Negotiating Committee and the Malayan Planting Industries Employers' Association, representative of the leading producers. The standards thus set are however widely disregarded by employers (generally Asians) who are not members of the Association,

and the Unions have a membership of only about 10 per cent. of the plantation labour force. They are predominantly Indian in staffing and membership and have at present a very limited appeal to or hold over Chinese and Malayan/Javanese labour. Their power to enforce and organize anything in the nature of a general strike is probably almost non-existent; their own internal organization is as yet far from possessing strength, clarity or certainty. Yet the part which the Unions have played since their purge from communist influence at the beginning of the Emergency has been on the whole in the best interests of their members, of the industry and of the future of Malaya. It has been in happy contrast with the tactics adopted by the Indonesian unions, which are instruments of communism, whose activities represent an increasingly grave threat to their members' employment. It cannot be stressed too strongly that pressure for higher wages than the trade will bear means, in the natural rubber industry, unemployment.

It is likely that the power of the unions, not at present very great, will develop and increase. This growth will be healthier in proportion as it is free from political forcing. Above all, future administrations will need to be vigilant lest the history of the rise of the Indonesian unions to a position from which they can browbeat and influence government in the communist interest should be repeated in Malaya. If building on the present foundations continues in the present spirit there is no reason at all why this should happen.

CONCLUSION

We sum up the sense of this paper as a plea for balance. We see every reason to hope that the natural rubber industry, which must in any case, during the future which we are considering, remain the staple industry of Malaya will, under wise administration, be able to carry the weight of Malaya's aspirations. We believe, however, that it will only be able to do so if politicians, employers and labour approach its problems in the spirit of seeking for a proper balance, and with a realization of the crucial importance to their country of the industry with which they have to deal. We believe, also that the fastest progress will be made by building generally upon the structure of the industry as it exists, rather than by seeking violent political alterations of it. Formidable as synthetic competition will always be, natural rubber has certain fundamental advantages arising from the economics of production. The balance must be struck so that these advantages are not lost. If this is done the future of Malaya may well compare favourably with that of any comparable territory.

(Supplied by the Conservative Commonwealth Council, for circulation).

Turkey To-day*

By M. PHILIPS PRICE, MP

ONE OF THE most striking changes that has come over the political scene in Europe, and in the Middle-East in particular, is the change in the state of Turkey.

From being the so-called "Sick man of Europe" in the days of our fathers and grandfathers, and in our day too in the case of those who are over 40, she has become the strongest and most stable state in South-East Europe and the Eastern Mediterranean; and a tower of strength to NATO and the Western world.

I have been privileged during my life to watch this change, and to have seen the old Turkey and the new Turkey. I remember the time when people were saying that it would not be long before the Western powers carved up the Ottoman Empire among themselves and every one was concerned about who should have what part of that Empire. On that of course none could agree. The ox was always going to be killed but every one squabbled about how to cut it up.

Opinion was divided in this country during my youth, a division that first showed itself in the Russo-Turkish war of 1877-78. The Conservatives were fearful about the break-up of Turkey because they knew it would mean that Russia would get a large slice and that would bring her southwards nearer the route to India. The Liberals were less worried about this. Under the influence of Gladstone they were more concerned about the welfare of the Christian population of the Ottoman Empire and talked of running the Turks "bag and baggage out of Europe."

My family was Liberal and although my people did not hold this view at all strongly I heard it frequently expressed among friends. Yet as a young man in my early 20's I remember the revolutionary reform movements in Russia, Persia, and, last but not least, in Turkey. I sympathized as all Liberals did. I remember the Young Turks Revolution of 1908 and was impressed with the evidence that the Turks, too, were showing signs of desire for reform.

What I thought was proof that these Liberals were wrong lay in their view that no good could ever come out of Turkey; that virtue in the Ottoman Empire was the sole monopoly of the Christian, i.e., Greeks, Bulgars, and Armenians.

An opportunity to visit Turkey did not come my way until 1912. In that year, and again in 1913, I made two extensive tours of the Ottoman

* Lecture delivered to the Anglo-Turkish Society in London on July 26, 1955.

Empire. In those days for £100 and a passport you could go anywhere in the Middle-East for six weeks to two months. After a week or ten days in Istanbul where I met Talaat Pasha, and Enver Pasha on one occasion, I made off to Anatolia and on horseback rode many hundred miles across that fascinating land in the early days of its awakening from its long sleep.

What struck me most in those days was something which the Young Turks had not been able seriously to alter, although they had tried hard to do so. That was that all commerce, business, and finance were run by Armenians, Greeks, and Jews. The Turk and Mohammedan population were the *effendis*, the soldiers and administrators who sat in Government offices or manned the Army.

Turkey in fact was suffering from the effects of the old Capitulations and the "millet" system which suited the early days of the Ottoman Empire but was completely out of place at that time. The Sultan of Turkey, of course, inherited the system of the Byzantine Empire. All subjects of the Emperor, Christian, Muslim, or nature-worshipper were his serfs but each had their own church, government, customs of marriage, property, and family relations. Foreign countries had commercial communities in the principal towns, mainly Greek. This helped to bring trade and a measure of wealth to the Empire.

In time this state of affairs began to create difficulties. As democratic ideas filtered in from Europe and nationalism penetrated the hitherto subject peoples, the Christian population of the Empire became less happy with their lot. But the trouble was that the Christian and the Muslim population of Turkey interpreted the Reform movement differently.

Following the absolute rule of Abdul Hamid the Muslims of Turkey thought that now that a democratic nation under a constitutional Sultan had been created, all citizens would be equal—Muslims would embrace Christians as brothers and both would have identical status and rights in a reformed country. Alas, the Christians thought otherwise. They interpreted the change as one giving them a chance to break away from Turkey and form independent states. They desired the break-up of the Empire, having no belief in a reformed Turkey. In 1912 I interviewed the Greek Patriarch in Constantinople. He was cautious but I could see he had little faith in a democratic Turkey.

In Eastern Anatolia in 1913 I interviewed the Armenian bishop of Adana and the Catholics of Siz in the Anti-Taurus. The bishop looked forward with pleasure to a European war, which he saw as imminent, when the Armenians would have their own country, formed of the villages of Eastern Anatolia. How right he was in his dates, but how wrong in his deduction! The Armenians of Istanbul had fantastic visions of the

creation of an Armenian state in a region where the Armenian population was nowhere more than 30 percent of the total. Visits to Russia in those years confirmed me in the belief that the Government of the Tsar was behind a lot of this.

At no time did the Young Turks have a proper chance. They needed five years of peace to realize their idea. Instead, they got seven years of war.

In 1912 I was in Bayazid, an old northern town on the trade route to Persia. One evening the Mutasariff visited me and said, "I have the honour to inform you, sir, that Montenegro has declared war on us." He smiled sadly. "Turkey is surrounded by enemies on every side. Across the hills to the north the Russians are getting ready." We could see Ararat and the frontier. How right he was. Two years later it came, and Bayazid was the scene of bitter fighting.

Three years later I was in Bayazid again, but with the Russian Army, as a Middle East war correspondent. Russian agents were exploiting the Armenians of Turkey and inducing them to act as spies and partisans. I saw while I was with the Russians how Armenians from Turkey crossed the front lines to the Russians to form volunteer battalions and pass on information.

I was with one of these Armenian battalions and the Kuban Cossack Brigade in a campaign round Lake Van in the autumn of 1915. One cannot excuse massacre but can understand the Turks' disillusionment and exasperation and their subsequent treatment of the Armenians.

While I was in the northern villages of Turkey in 1912 and 1913, and again in 1915 and 1916, with the Russians round Kars and Adahan I remember noticing how heterogeneous the population was. Not only were there Armenian, Greek, and Russian non-conformists, but every type of Muslim sect, Sunnis and Shias, of course, plus Kizilbashs, Kurds, and Yazidis (or devil-worshippers)—a hotch-potch of races and religions. This mixture continues to some extent in the Russian Caucasus. The Communists encourage small cultural groups with separate religions, costumes, dances, and languages, provided, of course, everything is subordinated to the will of the Communist Party bosses.

When I was last in Northern Anatolia in 1947 I saw great changes. The Christians had gone. The Armenians had been massacred. The Greeks had gone home through an exchange of populations. The different Muslim sects seemed to have become merged with the Turkish peasants absorbed by the new Turkey. Only the Kurds continued to wear their distinctive costumes, but they had no special rights and were treated as just Turkish citizens. The Turkish Republic has consolidated the former Muslim population of Eastern Anatolia by giving them equal

rights and requiring equal duties as citizens. The Kurds still speak Kurdish among themselves, and perhaps the Kizilbashs still hold to their old belief of being "Mountain Turks!"

Visiting Turkey before the First World War I often met with the question whether Turkey, in the event of hostilities, would fight on the side of France and Great Britain or of Germany. My own view was that it was very much "touch and go."

I went in 1913 with letters of introduction to Talaat Pasha. He treated me with great courtesy and wrote letters to the Valis (Governors) of Anatolia asking them to give me every assistance. He was pro-English and pro-French and would have liked Turkey to be neutral. Talking with him one day a smart young officer came into the room and Talaat introduced me to Enver Pasha. He bowed stiffly and turned away, clearly reluctant to greet an Englishman. Enver was the man who carried Turkey into the war on the side of Germany.

I have often thought that with better handling Britain might have kept Turkey neutral. We abandoned our Turkish friends and allowed Enver to dictate Turkish policy. We should have offered the Turks an alternative for the system of Capitulations, meaning the enjoyment of extra-territorial privileges by the subjects of foreign states. We had to do it anyway later. It would have strengthened the hands of Talaat and his friends, but it was not to be.

To-day one gains the impression in Turkey that there has been a great political revolution. Social and economic changes, however, are more gradual, which is natural. One cannot make sudden changes in age-long customs. Yet the Turks are essentially practical people. They are not great thinkers or theorists. They have not, like the Arabs, founded any great religious movements; nor has Turkey been the centre of culture and learning for centuries, like Persia. The Turks learn from other people and apply their lessons to their own ways of life. They have a literature, and a practical, useful, and orderly language as befits a nation of soldiers and administrators.

But what strikes one most to-day in Turkey is the wide gap between the modern Turk and the old fashioned countryman of half-a-century ago. For instance, in the same village one may find a modern tractor and other machinery working close by the needle-plough, drawn by an ox, as in the days of the Seljuks and Sultan Selim: ancient and modern, cheek by jowl.

Again, take the position of women. Modern Turks would have you believe that all Turkish women are now emancipated. They are to be seen in the principal towns certainly, where, like women in Europe, they work as clerks or factory-hands and even become lawyers and M.P's.

Yet I have been to villages within an hour's run of Ankara where, the moment I Appeared, shadowy figures who had been washing by the village fountain fled through darkened doorways. Not a woman's face was to be seen.

As far as the economy of modern Turkey is concerned, compared with 43 years ago, the predominance of Greeks, Armenians and Jews in offices, banks, insurance, mining, and factory administration has given way to the fullest Turkish participation and control. Such interests and activity were previously considered *infra dig*. Yet the Turks have much to learn in respect of trade and business.

In industry and agriculture they are making great strides with foreign advice and help. In commerce and finance they seem less successful. Turkey suffers from constant inflation and her balance of payments is seriously adverse.

An ambitious and desirable programme for the importation of machinery and equipment has been undertaken but it has been held up because of finance. Attempts to obtain finance by exporting ungraded wheat and wheat above world prices caused resentment on the part of purchasing countries. There is a desire for bilateral trade, but a difficulty is the lack of understanding of the value of free exchange between nations. All this is the result of inexperience.

Improved methods of agriculture will enable the Turks to lower the price of wheat to peasants. This should help to check inflation.

Agriculture has made progress but the position of the livestock industry is much as I remember it 43 years ago. Better pedigree bulls and artificial insemination stations are not sufficiently numerous to have had much effect on the livestock industry.

In the matter of civic liberty Turkey may be said to have come right over on the side of countries practising the free way of life. Each person has full citizen rights, but freedom from arbitrary arrest is not fully established. Charges are always preferred in court, but some time may elapse before legal processes are initiated.

Education is the signpost of progress. Turkey to-day has more literates than any country in the Middle-East, except Syria. Turkey's need is to develop technical education, so that the youth of the country will not seek to over-man the civil service, legal profession and journalism.

Finally, it may be said that Turkey has achieved her historical destiny, an Eastern people who have consistently favoured the West and become at last an ally of Western Europe. In the early days of her history she had been the great power of the Mediterranean and Eastern Europe—always open to Western ideas. Decadence had come with rigid

Mohammedan institutions which blocked all change. Islam is a great religion and civilizing influence, but it is not readily susceptible to change.

The National Revolution changed all that. When I went to Turkey in 1946 she was a secular Republic. Religion was barred from schools. Official Turks said religion was a private matter having no effect on the morale of the people. Mosques in towns were empty, but still attended in villages. The next time I went the Turks were discussing whether religion could be taught in schools. Now it *is* being taught. A people cannot live and thrive without spiritual guidance.

And so I believe that the Turkish Republic, freed from the restrictive encumbrances of medieval Islam, may yet lead the East to a long overdue religious reformation. Turkey is well placed for such a task in that she is the only Middle-East country of Asiatic origin that has assimilated the Western way of life.

The Plight of the Refugees in Viet Nam

By Monseigneur RODHAIN*

HAVING HAD the opportunity to visit during the years 1940, 1944 and again since, Oflags, Stalags, camps for refugees and displaced persons in Central Europe as well as in Palestine, I may be in a position to compare them with what I have now found in Viet Nam. My first impression has been that the refugees in Viet Nam are not in such a lamentable condition. This can be explained by the climate, the ease with which a village of straw covered huts can be improvised and food provided. The climate is the same, as also the crops and the language. Moreover the faces of the refugees took that expression of placidity and resignation which is habitual in the East.

On the first day of my visit all the parishes of the Lac-on camp—a four miles circuit—were beflagged, and every 200 yards there was a triumphal arch in honour of Cardinal Feltin and his representative. In general the Papal flag was at the top of the mast followed by the colours of Viet Nam and of France. I remember that on another day I came across a place which was not decked with flags, and, when I inquired

*Based on a lecture given by the author to the Comité Central de la France d'Outre-Mer, who deputised for Cardinal Feltin in visiting the refugees.

the reason, was informed that it was just an ordinary village and not a refugee camp. I mention this to show how little difference there is between a refugee camp and a long established population centre.

The camps fall into several categories. There are the transit camps, of which I visited those that are in and near Haiphong. 22,000 were anxiously awaiting evacuation, yet on one day, being a Sunday, only 183 left on a steamer with 500 places. I visited villages nearby which were abandoned and the churches were empty. There were also camps for children who are Eurasians, conducted by the Sisters of St. Vincent de Paul: as later they will certainly claim their rights as French citizens, these children present a special problem.

At first these camps (to receive 600,000 refugees, the original estimate was 100,000) had to be improvised, and were placed in the open spaces that had been cleared of jungle by the French Army for security reasons.

The most pressing problem at this early stage was the water supply and this was undertaken by the French Army. Then as quickly as possible, the refugees were established in newly created villages with their own rural economy. This was a real *tour-de-force* accomplished without sickness, epidemics or conflict, the credit for which is with the French General Staff, who, thanks to their skill and tact, were able to accomplish the task with the approval of the Viet Nam Government.

It is hoped that the establishment of the refugees in these villages will be permanent. Two factors encourage this hope. In the first place they were not a vast leaderless mass of people. The inhabitants of each village arrived as a complete entity, with the priest at the head, who made himself responsible for public order. Secondly there was plenty of vacant land, which had belonged either to the Crown or the big companies, or where the original landlord had disappeared.

The only difficulty was the very natural dissatisfaction of the indigenous population (who had secured their fields by the sweat of their brow) when they witnessed this free distribution of land.

The most pressing problem, therefore, is that of allotting the necessary land to these 650,000 refugees so that they may leave the Stalags where there is nothing for them to do, and commence a fresh life in newly established agricultural villages.

I will now describe another type of camp, those that have been established by the religious orders. In certain of the parishes of Tonkin the proportion of religious institutions is quite considerable and on arrival at any one of them one may be received by as many as 100 or 150 nuns. A typical example is at Thanh-hoa where I paid a visit to a group of small seminarists. They have themselves cleared the ground and erected their monuments. There was a choral reception, speeches, religious

services and congratulations. Had I closed my eyes I would have thought myself to be at the reception of a Bishop in some French provincial town. I asked how they had managed to transfer themselves there and it was explained to me that they had not been able to do so in good order as they had only been given half an hour's notice. The head of the clergy had then summoned 11 professors and their 52 pupils and given them freedom of choice, saying "go back to your families, do what they tell you and go out and either remain in the north or go to the south or leave singly: but in any case if you want to continue your life in the seminary make your way to Blao in six weeks time." After the six weeks when the head of the clergy arrived there he found that all the 52 little seminarists had arrived. When I related this story on a previous occasion a Franciscan Monk told me there was nothing extraordinary in my story as he had had the same experience.

I may now refer to criticisms that have appeared in the Catholic press regarding events in Indo China adding that it had all been our fault, that we should have established an indigenous clergy and given them a certain amount of autonomy. I may reply that there was already in existence in Tonkin an indigenous clergy as early as 1668 and that they now number 1,430 amounting to four times the number of European missionaries. I may add that in the diocese of Bui-chu there are more christians and more indigenous clergy than in the whole of Japan. These facts explain that the Pope has called Tonkin the elder daughter of the Church in the far east.

The Apostolic Delegate, who is the representative of the Pope remained at Hanoi and on the 25th August of last year he sent a circular to all the clergy in Viet Min of which the essential sentence is as follows. "The mere presence of the priest, even though he be deprived of all liberty is a source of comfort to the faithful and suffering leads to divine forgiveness."

What will become of these refugees? In July 1956 elections under the supervision of the Armistice Commission are due to take place in the two zones: the border at the 17th Parallel is to disappear and whichever side has the necessary 51 per cent majority will take possession of the whole. It is difficult to prophesy the result but it is not rash to occupy one's mind with what would happen. Is there ground for fearing the worst? A high French personality said recently to Admiral Radford "more than the 7th American Fleet which cruises off Formosa, the 600,000 refugees in the south may prove to be the salvation of the Far East because their gesture is a great example." If the free world appreciates that example this may have a very important bearing on the situation.

The Co-operative Movement in the New Egypt

THE HISTORY of the Egyptian Co-operative movement has passed through various stages of development, especially in so far as the movement's relations with the State is concerned. Such relations have been progressively strengthened, but the movement has not lost its popular character.

Since its inception, the Egyptian co-operative movement has opened various areas of activity. It has not confined itself to the field of consumers' or producers' co-operation, but has expanded to marketing of crops, housing, medicines, village reconstruction and petroleum. A number of wholesale co-operatives have also been established.

There exist in Egypt, at present, 2,150 co-operative societies and 22 co-operative federations. In the educational field, a number of co-operative magazines are published, and co-operative training centres were established. The size of membership has now reached one million members, and the capital and reserves are now estimated at L.E. 2,700,000, of which L.E. 250,000 have been invested in the Agriculture Credit and Co-operative Bank.

The value of services rendered by the co-operative societies is estimated at L.E. 16 million a year, of which L.E. 3 million are paid in loans from the Agriculture Credit and Co-operative Bank to various Co-operative Societies.

There are 1,760 agriculture co-operative societies in Egypt serving about 500,000 people. They employ a capital which amounts to just over one million pounds. The value of their services is estimated at L.E. 5 million annually.

The drive to form housing co-operative societies began in 1953, as a means of solving the housing problem in the country. Government employees and middle-income groups have been encouraged to participate actively in this drive. So far, 25 societies have been formed comprising 5,500 members. The capital invested at present is estimated at L.E. 600,000. It represents 40 per cent of the cost of the land and construction. The Government offers long-term loans equal to 60 per cent of the cost against 3 per cent profit over twenty years.

A co-operative saving society has been formed by the employees of the Agricultural Credit and Co-operative Bank. Besides organizing their savings, the society grants loans to its members on long-term conditions. Its capital is L.E. 2,140, and the record of its loans last year reached L.E. 35,000.

The workers and employees of Kafr El-Dawar Misr Textile Mills have organized a co-operative society for transport. It gives its services to its members to and from the mills at cost price. Its capital is L.E. 15,000.

A co-operative society for the supply of medicines to pharmacies has been formed by a group of pharmacists and 700 doctors. The value of its sales last year amounted to L.E. 500,000. Its capital and reserves are estimated at L.E. 70,000. These societies grant loans to farmers, supply selected seeds and fertilizers, and offers loans for the purchase of irrigation and agriculture machinery. Besides these loans, the societies participate in combating plant parasites and in some cases they supply their members with clothes and edible goods. These societies are spread in 44 per cent of the country's villages, and are increasing.

There are several co-operative societies which engage in the marketing of agriculture produce, especially vegetables and fruits. Their sales last year amounted to L.E. 300,000 in value, and the loans offered to their members amounted to L.E. 200,000.

Last season, a hundred co-operative societies were engaged in cotton crop marketing. Their total sales reached 60,000 cantars. The differences in price, to the benefit of their members, amounted to P.T. 170 cantar, in some cases.

The Agrarian Reform Act of 1952, provides for the establishment of a co-operative society in every village for the new holders among whom the land was distributed. The function of these societies is to acquire loans for the needs of its members; supply the members with seeds, fertilizers, animals, agriculture machinery and facilities for the packing and transport of the crop; guarantee the best use of land by using selected seeds and digging canals and drainage network; and market the crop for the members.

Besides the previous types of co-operative societies, there is a group of other types of which the following are the most important:

The Co-operative Society for Potatoe Producers. This society imports L.E. 100,000 worth of seeds annually for the use of its members. It owns cold stores capable of storing 1,500 tons. Other societies of this type are the producers co-operative, the poultry society in Natroun, the textile co-operatives in Fuwa.

Perhaps the most important of this category is the Co-operative Society for the Production and Marketing of Oil. The value of its sales last year reached L.E. 2 million, and its capital and reserves are estimated at L.E. 6,000,000. This society has been granted a concession for oil prospecting and production in the Sinai Desert.

There are 355 consumers' co-operative societies in Egypt, a number of which have been formed for the service of workers in large factories and firms. These societies mainly deal in groceries. They employ a capital of L.E. 500,000 and the value of their services last year reached L.E. 2 million. The present size of their membership is estimated at 261,000 members. Its capital and reserves are estimated at L.E. 70,000. Other co-operative societies have been formed for canteens and book supply for university and college students.

In 1943, during World War II, a central co-operative society was established at Cairo and a similar one in Alexandria. These organized provincial societies with the object of supplying members with the goods needed at reduced prices. They also contributed to combating the black market, particularly in vegetable, fruit and meat. These and other central societies in the provinces, 16 in number, last year decided to merge and form a mammoth "wholesale co-operative society" with a capital of L.E. 250,000.

There are 22 co-operative federations in Egypt, each of which covers one or more provinces of the country. At present, they organize the audit system of their respective member-societies and issue regular magazines such as the "Co-operative Torch" of Mit-Ghāmr Federation, "The Co-operative Mission" of the Simbillawin Federation, "The Co-operative Guide" of the Cairo Federation, and "The Voice of Co-operation" of the Fayoum Federation.

Besides this press activity, the co-operative federations organize summer camps and training courses for their members and staff. Meanwhile, a plan to form a co-operative confederation is being considered by representatives of the Co-operative Movement and the Department of Co-operation at the Ministry of Social Affairs.

It is true that there is no co-operative bank in Egypt, but co-operative societies deal with the Agriculture Credit and Co-operative Bank which they hope to convert into a banking agency for the movement exclusively. The first step in this direction was the change introduced into the Bank's name and into the structure of its Executive Board. This includes at present 18 members of whom nine are appointed by the Government which sees that they include active members of the co-operative movement. On the other hand, co-operative societies elect three members to represent them on the board.

Egyptian Co-operative Societies allocated part of their profits, not less than 10 per cent to social services.

The co-operative movement in Egypt is regulated by law. But now that ten years have passed since its promulgation, there is need for the introduction of new amendments to this law. The objectives of the

proposed amendments can be summarized in two major points: (1) Adherence to the democratic spirit of the co-operative movement without undue government intervention. (2) The guarantee of closer supervision over the co-operative societies against abuse or deviation.

In harmony with the proposed amendment, a new policy for agricultural credit based on co-operation is now under consideration. This policy aims at co-operative societies in the villages being able to undertake banking business; changing the present structure and financing of the Agriculture Credit Bank; and simplifying this bank's transactions and dealings with the Co-operative Societies.

Egypt does not hold aloof from the International Co-operative Movement. Since the revolution, Egypt has participated in international co-operative conferences. An Egyptian co-operative expert acted as rapporteur to the International Labour Organization Co-operative Conference recently. Its delegation was again active in an educational conference for co-operation held recently in Europe. Co-operative members from the Sudan, India, Pakistan, Iran, Malaya, Ceylon and many European countries have paid visits to Egypt, and have been highly impressed by the country's progress in this field.

While on the subject of co-operative and economic development enterprises, the inestimable services rendered to the country's economy by Misr Bank and its affiliated companies should be noted. The history of this great national institution shows how in the early twenties, the urge to secure economic independence was as strong as the desire to obtain complete political independence.

About 30 years ago, Talaat Harb, a great patriot, who had had vast experience in finance, together with several prominent personalities, believed the time had come for a genuinely national bank to be founded. Several wealthy people, however, were pessimistic as to the prospects of a bank which, in its great founder's words, was to contribute in large measure to the country's development in the financial, commercial and industrial fields and thus give the lie to those who believed that Egypt's financial affairs should be left in foreign hands for several decades.

However, such pessimists were soon converted, particularly when they found that the Bank not only opened branches all over the country but even began to play a prominent role in Egypt's development by founding several affiliated companies covering the fields of textile, edible oil, cotton ginning and fishing industries besides insurance of every description, air and inland water transport, navigation and cotton export.

Among these affiliated companies were the Mehalla Spinning and Weaving Mills founded in 1924, Misr Silk Textiles, founded in 1927 with mills at Damietta and Helwan, Misr Airlines founded in 1932 establishing

regular air communication with the Sudan, the Mediterranean and the Red Sea regions, the Misr Cotton Ginning Company founded in 1924 with mills at Mehalla, Mansoura, Benha, Wasta, Fayoum, Tama, Maghagha, Fashn and Girga, the Misr Fine Textile Mills founded at Kafr El Dawar in 1938 and considered to be one of the most important concerns of its kind in the whole world, the Misr Company for the Sale of Egyptian Products founded in 1932 with branches all over Egypt, the Misr Tourism Company, the Misr Company for Fisheries, possessing the largest factory in the Middle East for the manufacture of buttons, the Misr Pharmaceutical Products Company, the Misr Navigation Company, the Misr Cotton Export Company and the Misr Insurance Company, carrying on activities all over the Middle East.

Under the revolution, the Misr Bank and its affiliated companies have taken active part in the country's development schemes which are being carried into effect. In the hotel industry and in the important schemes for popular housing, slum clearance, and reconstruction, the Misr Bank is contributing in large measure to the success of the great enterprises.

In aviation, it is appropriate to point out that Egypt has made great progress. Training planes are now manufactured in the country while excellent parachutes have also been made locally on a large scale.

As for civil aviation thanks to Misr Airlines, she has made great strides towards progress. Founded originally in 1923 with an initial capital, of L.E. 20,000, the Misr Airways capital has now risen to L.E. 1,000,000. It possesses a fleet consisting of the most reliable and most modern aircraft with experienced pilots and engineers as well as properly equipped workshops.

The Company's regular lines include two daily flights from Cairo to Alexandria and vice versa, 11 weekly flights to Beyrouth, two weekly trips to Aden one of which is via Jedda, one weekly journey to Baghdad via Damascus and another to Kuwait also via Damascus, one weekly flight to Port Sudan via Jedda and a weekly flight to Tunis via Benghazi and Tripoli.

Moreover, the Company runs a regular direct line to Aswan during the winter, transports Christian pilgrims to Jerusalem on the occasion of the Easter celebrations and Moslem pilgrims to Hejaz. New regular lines are about to be established between Egypt and Cyprus, Athens and Karachi.

EDITORIAL NOTE: The information contained in the article on Uzbekistan, reproduced in the July issue by permission of the *Central Asian Review*, was compiled entirely from Soviet sources.

REVIEW

INDIA NEW PATTERN. (Allen & Unwin). 12/6d.

Lady Hartog's book, published after her tragic death and with a foreword by Lord Hailey, is the successor to two other works on India. In 1935 she published *Living India*, and in 1944 a more important work, *India in Outline*. Her knowledge of her subject was largely acquired during the period when she was living in Dacca, from 1920-1925 when her husband Sir Philip Hartog was Vice Chancellor of the new University there, and from the years 1926-30 when he served as a member of the Public Service Commission in Delhi.

This book, the record of a visit after a lapse of over twenty years is the result of an invitation to attend the All India Womens' Conference as their guest; this is a body in which she was deeply interested and in which she took a very active part at the London branch. I have seldom met any European with such an insight into the lives and part played by the women of India as had Lady Hartog. She had innumerable friends amongst them and she kept in constant contact with them.

In her own Introduction she says "I have tried to give the general reader some picture of India as I saw it after an interval of more than twenty years. I have described the changes which struck me most, but I have not attempted to describe the richness and variety of Indian life, the light and colour of the Indian scene, or the warmth and generosity of the Indian people. These have not changed. They make it still now, as in the past, a country to which it is easy to lose one's heart."

It is good that she herself has told us this, for to those of us who know and love India the book fails to impart that vital feeling which the country exhales and which is a part of the extraordinary pull which India has on all who go there. It is indescribable, but it is something deeply spiritual and at the same time gay and philosophical. For this reason it is disappointing that there is little or no comment on the personal feeling of the individual now that Independence has been achieved. It would have been valuable to know how the new trends are showing in the aesthetic life of the country.

Nevertheless there is much to be learned from this admirable account of the work now being done in the Welfare and Social services and the author's sane and well balanced judgement on each section is that of a clear sighted and objective woman.

Because Lady Hartog's interest lay chiefly in these social and welfare services it is natural that the greatest stress is laid on them, and she visited a great many centres and talked to a great many people vitally concerned in these matters. Not the least of the facts emerging from *India New Pattern* is the immense and overwhelming mountain of difficulties with which this rapidly developing country is faced.

FRANCES FAVIELL

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